# AMERICAN GAS ASSOCIATION MONTHLY

## Gas Research Develops Radically New Brass Melting Furnace
By ALEXANDER FORWARD

## How We Set New Business Records
By CHAS. D. GREASON

## What Future for Utility Regulation?
By HON. LOUIS L. EMMERSON

## The Utility Industry Is a Trusteeship, Not a Trust
By OSCAR H. FOGG

## Training Supervising Personnel
By WILLIAM L. DIEHL

## Cost Accounting—Its Rightful Place in Utility Management
By E. H. SELBY

## Beautify the Plant—It Pays
By R. D. LEWIS

*May, 1929*

Volume XI
Number 5

HINTS FOR GREATER COMFORT IN YOUR NEW HOME

## To Those Who Want to Develop the Domestic Load:

# A WORD TO THE WISE is enough!

Wide-awake gas executives are paying more and more attention to development of the domestic load through promotion of completely gas-equipped homes. Only a few such homes will give a decidedly appreciable increase in gas sales. Ten to fifteen times more gas is used than in homes which boast only of a gas range.

Here is a booklet which has been especially designed to inform the home builder of the many services which gas performs and performs well. At the same time specific appliance information is given.

Hints for Greater Comfort in Your New Home

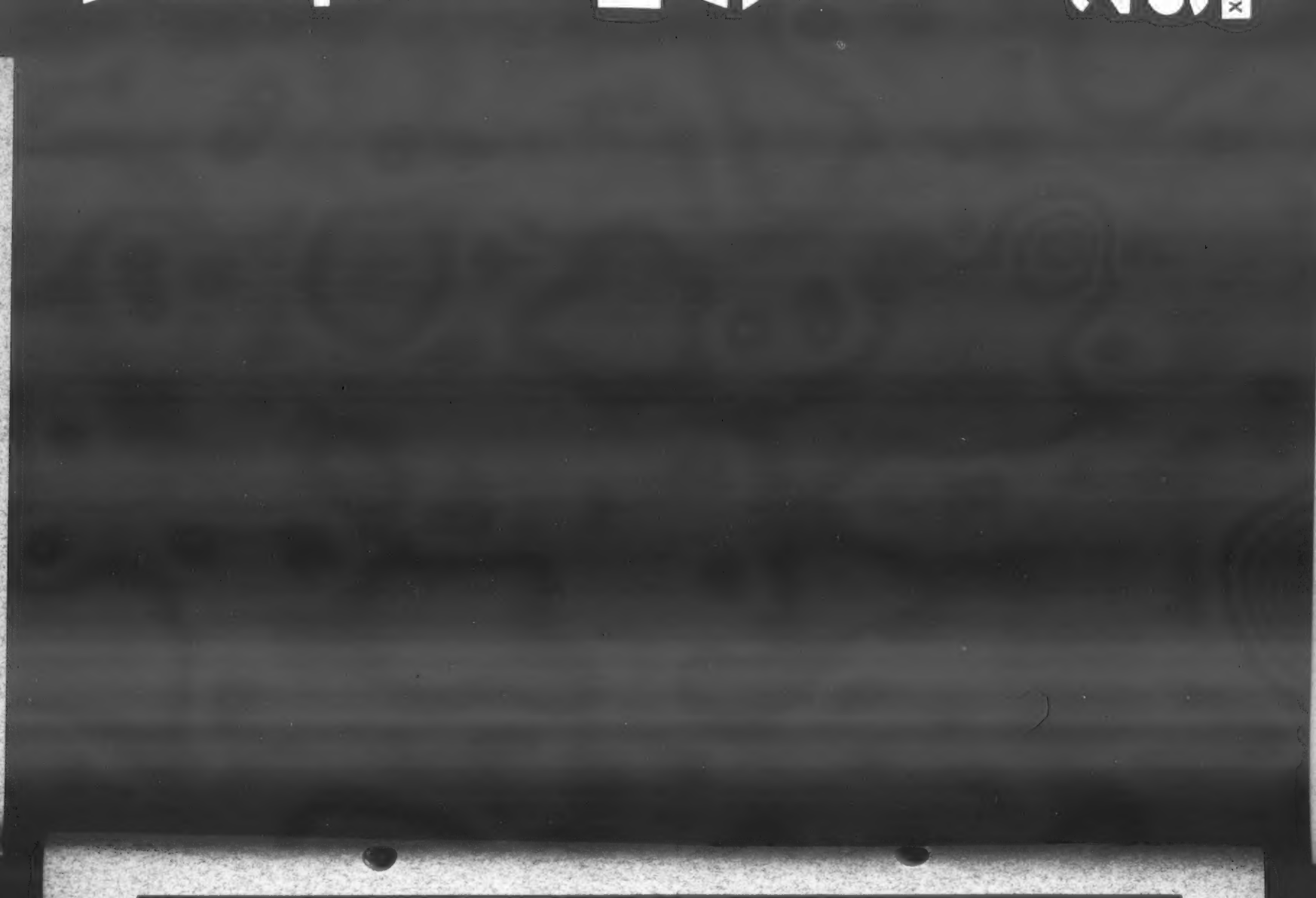
is the name of the book. It is to be presented to the home builder. It is in loose leaf form so that only those appliances need be incorporated which are suitable for the home in question.

Space is provided on the pages referring to the range, water heater, fireplace heater, incinerator, refrigerator, laundry equipment, and house heating equipment, so that various booklets on the particular appliances recommended can be pasted in.

Low Prices For the Booklet Are First 100.....25 cents each
All over 100.....20 cents each

A WORD TO US
Is Enough for a Sample Copy

AMERICAN GAS ASSOCIATION
420 Lexington Ave., New York, N. Y.



# AMERICAN GAS ASSOCIATION MONTHLY

Howard F. Weeks, Editor



Advisory Committee

Frank LeRoy Blanchard  Harlow C. Clark  E. Frank Gardiner  F. Harvey Holden
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THE DATES OF THE NATURAL GAS DEPARTMENT CONVENTION AT KANSAS CITY, MISSOURI

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PLAN *NOW* TO BE THERE *THEN.*


The Association does not hold itself responsible for statements and opinions contained in papers and discussions appearing herein.



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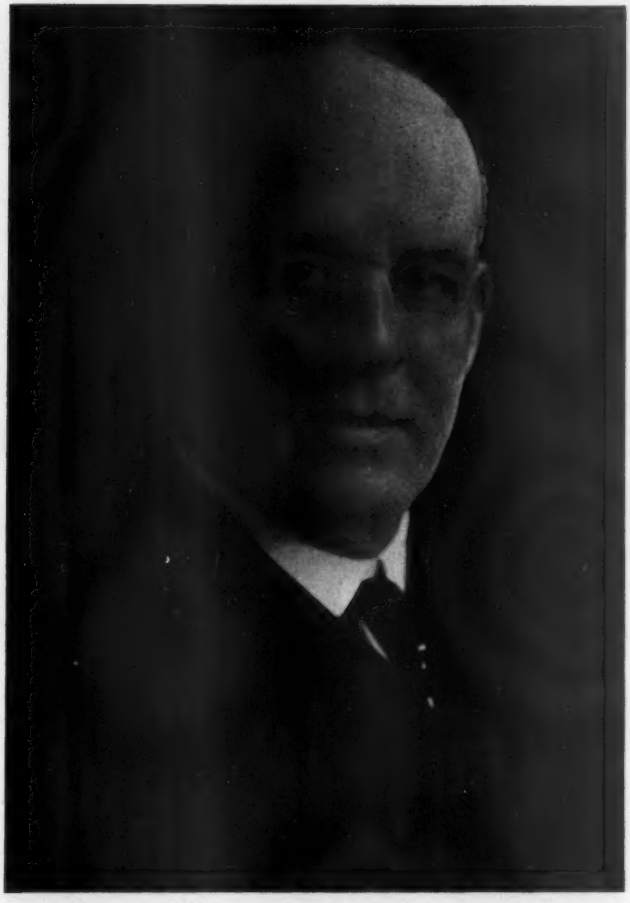
# Our Own Who's Who



## XLVIII

## T. B. GREGORY

BORN Oct. 15, 1860, Philadelphia, Pa. Educated in public schools at Philadelphia, Pa., and Foxburg, Pa., and Brooks Military Academy, Cleveland, Ohio. Entered oil and gas business in 1885 at Foxburg, Pa., where he made arrangements with the Union Light and Heat Co., now part of Columbia System, to furnish taps for new consumers and repair leaks. Advanced from service man to general manager, secretary and treasurer of this small company in successive steps to Chairman of the Board of the Pittsburgh operating group of properties of Columbia System and also vice-president, director and member of Executive Committee of Columbia Gas & Electric Corp.

Mr. Gregory is also an officer and director of many of the subsidiaries of the Columbia Gas & Electric Corp., a director and vice-president of the Dallas Gas Corp., Lone Star Gas Corp., Connecting Gas Co., Reserve Gas Co., Reno Oil Co., a director of Emlenton Refining Co., Ohio Valley Refining Co., Uinta Pipe Line Co., director, vice-president, and treasurer of Western Public Service Corp., vice-president of Utah Gas and Coke Co. and Ogden Gas Co., director and chairman of board of Eastern Pipe Line Co. of New Jersey, and Manufacturers Light & Heat Co., member of the firm of Crawford & Gregory, and officer or director of many other oil and gas companies.

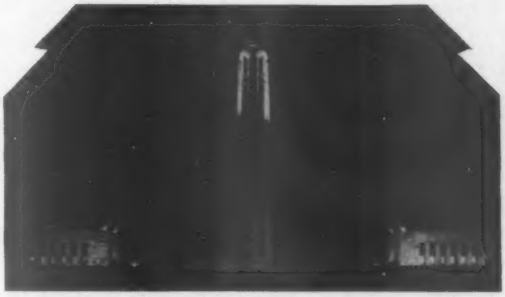
He is a director of many banks. Is an active member of the American Gas Association, American Petroleum Institute, and other organizations. During the World War was assistant to the Director of Oil Production, U. S. Fuel Administration in Charge of Appalachian Fields and also was Director of the Bureau of Natural Gas, U. S. Fuel Administration, located at Washington, D. C. Is member of the Executive Committee of the Natural Gas Department.

# AMERICAN GAS ASSOCIATION MONTHLY

VOLUME XI MAY, 1929 NUMBER 5

## Natural Gas Meeting Opens May 6

EVERYTHING is in readiness for the Annual Convention of the Natural Gas Department of the American Gas Association to be held at Kansas City, Mo., May 6 to 9.



*Kansas City's famous war memorial*

The program consists of many papers of exceptional merit. Among the speakers are many men who are very prominent in the public utility industry of the United States. The exhibition of appliances and equipment will be extensive, and it is expected that the manufacturers will have on hand the latest models of appliances and the last word in equipment. The entertainment features will be of high order.

The attention of all is directed to the meeting for all women in the natural gas industry. This will be held Monday, May 6, and Miss Lois Upshaw will preside. A number of papers of real value will be presented.

The following special train information is of interest:

Special Pullman cars will be attached to the Pennsylvania train leaving Pittsburgh, Saturday evening, May 4, at 6:00 o'clock, daylight saving time, arriving in Columbus at 11:00 o'clock, where the Ohio delegates can get aboard. These cars will arrive in St. Louis at 8:30 Sunday morning, leaving at 9:00 o'clock via the Missouri Pacific Railroad, arriving in Kansas City at 4:30 Sunday afternoon.

Returning, these cars will leave Kansas City at 3:00 o'clock Thursday afternoon, May 9, arriving in St. Louis at 10:00 o'clock and leaving there at 12:03 A.M., arriving in Pittsburgh at 7.05 o'clock Friday evening.

If sufficient reservations are made, the cars will be operated as a special train, running from Pittsburgh to Kansas City, stopping at Columbus, Dayton, Indianapolis and St. Louis to pick up any delegates en route. This, of course, cannot be determined until all reservations are made.

Reservations may be made through Arthur Booth of the Pittsburgh Supply Co., Pittsburgh, Pa.

Chairman Meals has stated that there is every indication of a record-breaking attendance. All members of the Natural Gas Department are familiar with Kansas City's hospitality, and this insures a good time for all as well as a worth-while time. Certainly the program of the business sessions is one of the best that has ever been arranged for natural gas meetings, as is evidenced on the following pages.

*S. W. Meals*

*H. C. Morris*

*J. M. Garard*

*Alex. Forward*

# Program of Natural Gas Convention

## Kansas City, Mo.

**Monday, May 6**

Opening of Exhibition, 9:00 A.M.

Meeting of Main Technical and Research Committee, 10:30 A.M.

Meeting of the Managing and Advisory Committees, 4:30 P.M.

Annual Dinner, Managing and Advisory Committees, 6:30 P.M.

**Tuesday, May 7—10 A.M.**

Opening remarks by Samuel W. Meals, Chairman, Natural Gas Department.

Invocation, Dr. Robert Nelson Spencer, Rector of Grace and Holy Trinity Episcopal Church, Kansas City, Mo.

Address of Welcome, Hon. A. I. Beach, Mayor of Kansas City.

Address of the Chairman, S. W. Meals, Carnegie Natural Gas Company, Pittsburgh, Pa.

Appointment, Committee on Chairman's Address, H. C. Morris, vice-chairman, Natural Gas Department.

Secretary's Report, E. J. Stephany, Pittsburgh, Pa.

In Memoriam, by John B. Garard, Ohio Fuel Gas Company, Columbus, Ohio.

"The Association's Obligations," O. H. Fogg, President, American Gas Association.

"The Future of Our Industry," W. A. Jones, Chairman, Executive Committee, Henry L. Doherty and Company, New York, N. Y.

"Serving the Industry," Alexander Forward, Managing Director, American Gas Association.

"Some Pipe Line and Transmission Problems," John C. Diehl, Metric Metal Works, Erie, Pa.

**Tuesday, May 7—2 P.M.**

"What Natural Gas Adds to the Wealth of a State," H. J. Hoover, Natural Gas Consultant, Cincinnati, Ohio.

"Selling Domestic Gas," George Bowersox, Southern California Gas Company, Los Angeles, Calif.

*A. I. Beach*

*W. A. Jones*

*O. H. Fogg*

*E. J. Stephany*

*H. C. Abell*

"Changing Over a City's Gas Supply," H. C. Abell, vice-president, Electric Bond and Share Company, New York, N. Y.

"What We Are Doing in Research," H. C. Cooper, Hope Natural Gas Company, Pittsburgh, Pa.

"Measuring Large Volumes of Gas," T. R. Weymouth, Oklahoma Natural Gas Corp., Tulsa, Okla.

"Flow Through Pipe Lines," H. D. Hancock, Henry L. Doherty and Company, New York, N. Y.

"Industrial Sales," R. M. Redding, Dallas Gas Company, Dallas, Texas.

*T. R. Weymouth*

*H. C. Cooper*

**Tuesday, May 7—8 P.M.**

Smoker and Entertainment, Kansas City Athletic Club.

**Wednesday, May 8—10 A.M.**

"Cracking Natural Gas," J. A. Yunker, Louisville Gas & Electric Company, Louisville, Ky.

"Facts Relating to Natural Gas Service," J. J. O'Brien, President, Byllesby Companies, Chicago, Illinois.

"Distribution," E. A. Clark, Oklahoma Natural Gas Corporation, Tulsa, Oklahoma.

*H. D. Hancock*

*Geo. Bowersox*

Motion Pictures—Putting Out Well Fires, M. M. Kinley, The M. M. Kinley Torpedo Company, Tulsa, Oklahoma.

**Wednesday, May 8—2 P.M.**

"The Gas Industry—A Giant Servant," R. W. Gallagher, President, East Ohio Gas Company, Cleveland, Ohio.

Question Discussion—F. L. Chase, Lone Star Gas Company, Dallas, Texas, will preside and the following questions will be open for general discussion:

1. In what form can news be best supplied to local newspapers?

2. What are the latest developments in the use of expansion joints on welded lines?

3. What are the best methods of covering or coating pipes to prevent corrosion?

4. What control methods are used for distribution system pressure regulation?

5. What distribution system changes are needed when changing from manufactured to natural gas?

6. What metering equipment is best for large industrial customers?

*H. J. Hoover*

*J. C. Diehl*

*R. M. Redding*

*J. J. O'Brien*

*F. T. Eagleson*

*F. L. Chase*

*J. A. Yunker*

7. How can the volume of gas wells best be determined with the least waste of gas or danger to wells?

**Wednesday, May 8—6:30 P. M.**

Annual Banquet of the Natural Gas Department, Colonial Ballroom, Hotel Muehlebach.

Toastmaster, Freeman T. Eagleston, Columbia Gas & Electric Corporation, Columbus, Ohio.

"Getting the Most Out of Life," Edward James Cattell, Philadelphia, Pa.

"How Big is Your Business Picture?" Joseph F. Leopold, Manager, South Central Division, United States Chamber of Commerce, Dallas, Texas.

**Thursday, May 9—10 A.M.**

Report of Committee on Chairman's Address.

"Some More Wrinkles," H. J. Struth, **The Oil Weekly**, Houston, Texas.

"Natural Gas Research," N. A. C. Smith, Bureau of Mines, Bartlesville, Oklahoma.

"What the Public Expects of the Gas Industry," H. C. Blackwell, President, Union Gas & Electric Co., Cincinnati, Ohio.

Symposium—Selling to the Home, Mrs. Luella M. Fisher, Chairman, Home Service Committee, A. G. A., Erie, Pa.

Report of the Committee on Final Resolutions.

## Women's Meeting

**Monday, May 6—2:30 P.M.**

Presiding—Miss Lois Upshaw, Dallas, Texas.

New Business, Keith Clevenger, The Empire Companies, Bartlesville, Okla.

"The Home Service Job of Today," Mrs. Anna J. Peterson, The Peoples Gas Light and Coke Co., Chicago, Ill.

"Trade Paper Influence," George H. Finley, Managing Editor, **Western Gas**, Los Angeles, Calif.

"Natural Gas Conventions in Retrospect," Miss Mary Spear, American Gas Association, New York, N. Y.

*R. W. Gallagher*

*H. C. Blackwell*

*Mrs. L. M. Fisher*

*E. A. Clark*

# How We Set New Business Records

By CHAS. D. GREASON

THE value of active and highly efficient sales departments to gas companies and especially to those companies serving natural gas is being realized more and more throughout the country.

At Kansas City, Mo., in 1925, The Gas Service Company was organized to operate a large number of gas distribution companies in Missouri, Kansas, and Oklahoma which the Cities Service Company interests had taken over at that time. B. C. Adams, a veteran Doherty operator with wide experience, was selected to head The Gas Service Company. There were many problems to solve and among the important ones was: How to build up and increase the gas load in these properties.

Mr. Adams, following the policy of the Doherty companies, went to work to build up an efficient new business department, and he chose F. M. Rosenkrans as new business manager to accomplish this purpose.

These companies were to have a sufficient supply of gas. The work that had to be done was to add the greatest amount of gas equipment possible which would promote more rapidly the building of the gas load. This is the line that the new business departments have followed, even more so and to a greater degree since the gas supply was almost doubled to the various companies last year with the completion of a direct pipe line from the Texas fields to the Kansas City markets through Wichita and Ottawa.

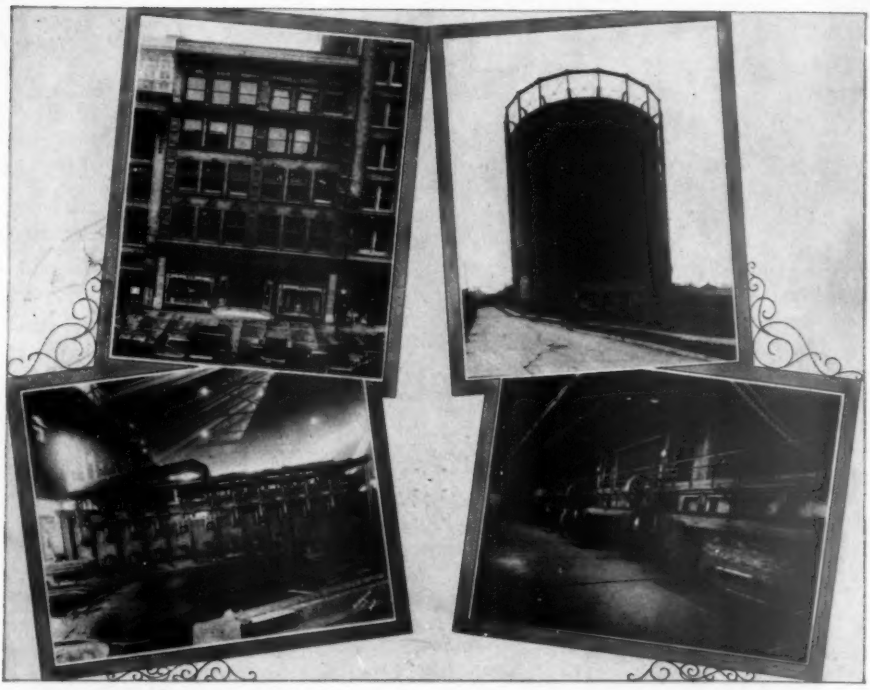
At the time The Gas Service Company was organized, three and a half years ago, the gas utilities composing this group with very few exceptions had been experiencing a downward trend of gas sales and revenues on a customer basis. In order to stop this downward trend, sales or new business departments were organized in every one of the local companies from 1000 customers upwards. Through the new business departments, efforts were carried out to promote every phase of the domestic gas business. Efforts were concentrated on those commodities and those ways and means which produce the most revenue, from selling and attaching a gas appliance to setting a meter. Major efforts of the new business departments were devoted to the promotion of the gas house heating business along scientific lines and, in a number of situations, the rate schedules were reviewed and special gas rates for house heating were installed to assist in the promotion of this business and at the same time to provide a good return to the gas company for the load attached. Attention was also focused on the sale of every other kind of appliance, such as automatic storage water heaters, ranges, home laundry equipment, etc., which would give the customer added convenience, service, and comfort in his home.

By carrying out intensive sales efforts along all lines, the new business departments of The Gas Service Company group have been very successful in increasing domestic gas consumptions and domestic revenues in all the companies within the group, stopping the downward trends which were very apparent before intensive selling activities were inaugurated.

The downward trend of revenues and consumptions which was experienced by the companies of The Gas Service Company group before initiating intensive selling activities has been little different than that which is being experienced in general in the natural gas industry. This is borne out by the report of the Department of Commerce, Bureau of Mines, published December 17, 1928, which states, in speaking for the trend of natural gas consumption in the United States as a whole, as follows: "The average consumption in 1927 per customer was 74,300 cu.ft. as compared with 77,500 cu.ft. in 1926, and was lower for the fourth consecutive year."

While the average domestic consumption of natural gas for the entire United States has decreased 8.3 M cu.ft. per year in the

Mr. Greason is with The Gas Service Company, Kansas City, Mo.



*At the top are shown the office building of the Kansas City Gas Co., and one of the gas holders in the city. At the bottom are shown two large industrial gas installations*

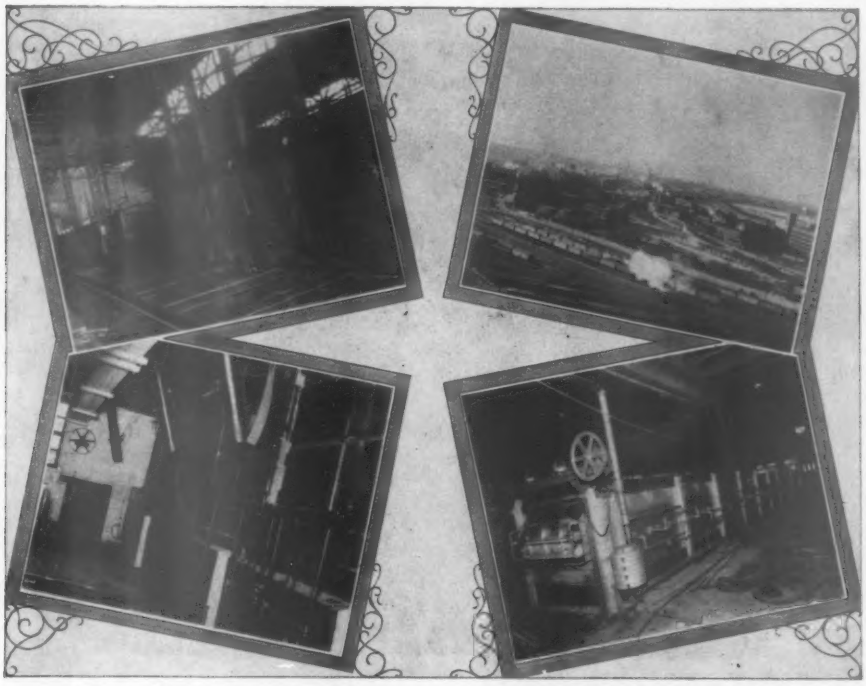
three years ending 1927, the average consumption per customer in The Gas Service Company group has been increased 4.8 M cu.ft. per customer in the three years ending 1928 as a result of intensive new business activities.

The gas utilities of The Gas Service Company group serve slightly more than 200,000 customers. Approximately 186,000 of these customers were reached through our new business departments last year. The annual domestic revenues of The Gas Service Company group have been increased approximately $2,000,000 during the past three and a half years. This has been the result of the aggressive new business department activities carried out in these companies since they have become a part of the Doherty organization.

In order to accomplish these results a tremendous amount of gas equipment has been sold to our customers, and each succeeding year this amount has been increased. The year just closed was one of the most successful in the sales activities since the organization of The Gas Service Company group. Some of the results secured will be of interest.

The total sales of the new business department of The Gas Service group for 1928 were $3,280,191. This represents appliance and installation sales amounting to $2,121,286, and sales made during the two customer ownership campaigns of $1,158,905 market value. The department's sales per customer in 1928 amounted to $11.02.

In the commercial industrial field, success was achieved last year in securing a large number of industrial contracts, and the working out by the industrial engineers of many problems. With the increased supply of natural gas made available by the pipe line company, a large amount of work was done by the new business department organization in securing large and favorable industrial contracts for commercial industrial gas. Much



*Showing several industrial gas installations in Kansas City, and a view of the industrial part of the city*

work was done among the hotels and restaurants in the sale of new and approved cooking equipment. In all of The Gas Service Company cities, bakeries, with few exceptions, are now using gas exclusively for fuel. The number of customers added in 1928 by the new business departments was 5360—an increase of 3.1% over the previous year.

During the past year the new business department sold 29,351 appliances. This total is an increase of 833,214 M cu.ft. of annual consumption, this being a very conservative estimate.

Five new business departments of the group exceeded $15 in merchandise sales per customer during 1928. The new business department of the Western Distributing Company of Eldorado, Kansas, has the distinction of again leading the other departments for the year, with sales of $25.27 on a customer basis. This department has for a number of years held the high record in the amount of gas equipment sold per customer.

The new business department of the Newton Gas Company ranked second in merchandise sales for the year on a customer basis, their sales amounting to $19.18. Other new business departments which exceeded $15 in appliance and industrial sales on a customer basis were those of the Western Distributing Company, Augusta, Kansas, the Consumers Gas Company, Miami, the Wichita Gas Company, Joplin Gas Company, and the Capital Gas and Electric Company, Topeka.

The appliance and installation sales were increased 7.3 per cent over 1927. In 1927 the appliance and installation sales on a customer basis were $10.45 as compared to $11.02 in 1928, a very nice increase.

Major attention in the sales activities for the year was devoted to the promotion of house heating, and all companies balanced this with the sale of standard domestic gas equipment from which good profits can be

(Continued on page 312)

## Advisory Board for Hopkins Gas Course Meets

*W. R. Addicks*

MEMBERS of the advisory board in connection with the Gas Engineering Course at The Johns Hopkins University, Baltimore, Md., held their second meeting in New York, Wednesday, April 10.

This board, which was appointed by Dr. Frank J. Goodnow, President of the University, held its first meeting in Baltimore on February 22 for the purpose of organizing.

The members of the advisory board are:

Chairman, Walter R. Addicks, senior vice-president of The Consolidated Gas Co. of New York.

Secretary, Charles M. Cohn, vice-president of the Consolidated Gas Electric Light and Power Company of Baltimore.

Howard Bruce, chairman of board, The Bartlett Hayward Company.

P. H. Gadsden, vice-president, The United Gas Improvement Company.

H. B. Rust, president, The Koppers Company.

H. S. Schutt, vice-president, C. H. Geist Company.

## New Terms of Award of Beal Medal of A. G. A.

THE American Gas Association offers as an annual award the Beal Medal, for the best technical paper presented at its annual convention. This medal was originally made available to the American Gas Light Association in 1897 and later to the American Gas Institute by the late W. R. Beal for the purpose of stimulating research contributing to the scientific development of the gas industry. Upon the incorporation of the American Gas Association in 1919, the family of W. R. Beal generously renewed the offer to his memory.

The conditions under which an award of the Beal Medal is made are:

1. To the individual who presents at each annual convention of the American Gas Association what is judged to be the most distinctive contribution to the progress of the manufactured gas industry in the form of a paper, of which he is the sole author, on the technical aspects of gas production and distribution.

2. An award is to be made only when there is a contribution of sufficient originality and value to warrant this distinction.

3. Not more than one medal is to be awarded annually.

4. An award is to be made only by and with the authority of the Executive Board of the American Gas Association, acting on the recommendation of a Committee on Award of Beal Medal composed of the immediate past Chairman of the Technical Section of the American Gas Association as Chairman, and the incumbent Chairman and Vice-Chairman of the aforementioned Section as members.

5. An award may be made, if the Executive Board so order, in memory of one who, if surviving, would have received such award, provided there be a widow, father, mother, son, or daughter surviving to receive custody of such award.

6. The Executive Board of the American Gas Association may at any stated meeting change any or all the above conditions, provided the changes are not inconsistent with the wishes of the donors of the medal.

## London Calls Pittsburgh on Gas Business

PROBABLY one of the first trans-Atlantic telephone conversations of special interest to the gas industry occurred recently when E. C. A. Bliault, managing director of the Ruud Manufacturing Company, Ltd., of England, called A. P. Brill, secretary and general manager of the Ruud Manufacturing Company, Pittsburgh, Pa., on the 'phone. The telephone call was over a distance of 3800 miles.

Mr. Bliault telephoned Mr. Brill to tell him of the completion of a most successful contract with the London Gas Light and Coke Company.

*Mr. Bliault talks with Pittsburgh*

# What Future for Utility Regulation?

By HON. LOUIS L. EMMERSON

THIS utility industry, which was in its infancy only a few years ago, has become a giant, overshadowing all others. The great majority of the people are directly and all the rest are indirectly interested in its efficient and economic operation in order that the service may be sold as cheaply as possible and distributed as widely as conditions permit.

© Anton Bruehl

*Just what effect will developments in regulation have on utility service?*

The utility companies, therefore, have a public responsibility aside from the duty to the stockholders and officials of the companies. The word "public" is used in connection with utilities because they are public. The nature of the business makes every utility employee a servant of the community served by his company. It is worthy of note that the greatest development of the utility industry has come since this fact has been recognized by company managements.

I can remember the time—and so can most of you—when the people assumed that utilities companies were their natural enemies to be watched with suspicion always and openly attacked as often as opportunity arose. The best the utilities could hope was an armed truce between battles over franchise rights and rate adjustments. There was no recognition of the community of interest between the utility and the people.

It is no discredit to your present executives to admit that the public was more or less justified in the attitude it assumed. Those were the days of early growth and eager development. Promoters and operators were hewing out their road as they went and they were not too particular as to the means they used in clearing away obstructions. Their sole purpose was to get ahead. It did not occur to them that they could progress much more rapidly if they would pause long enough to take the people into their confidence and get their cooperation and good will. They preferred to rely upon expedients which were not very successful at the time and which have been a detriment to the industry ever since.

It was not, in fact, until the establishment of public utility regulation that an understanding between the utilities and the public began to grow up.

I believe it was Massachusetts which first provided for public regulation of utilities, but the movement did not really begin until 1907 when both New York and Wisconsin adopted regulatory laws, recognizing that the utility is a natural monopoly and that as such it must be regulated by representatives of the public. Today, every state excepting Delaware has a regulatory commission of some kind.

The right of the public to regulate these natural monopolies is everywhere recognized.

---

Mr. Emmerson is the Governor of the State of Illinois. The material here is an abstract of his address at the recent convention of the Illinois Utilities Association.

The utilities, which were at first unfriendly to regulation, now find that it is the greatest stabilizing influence in their business. While it prevents their charging exorbitant rates or making excessive earnings, it guarantees a fair and reasonable return on investment and encourages extensions of service and improvement in plant and equipment. The people on their part have learned the economic lesson that no utility can give good service unless it can show a stability of value and an earning power that will attract capital.

Regulation, therefore, is constantly drawing the public and the utilities closer together and paving the way for the sort of cooperation which will be to the greatest advantage of both. Anything which tends to destroy confidence in regulatory bodies menaces this movement.

It is highly important that the commission shall be made up of men of the highest integrity, capable of passing intelligently upon the many complex problems of public utilities and that their rulings shall be honest and above suspicion of double dealing. The members should be able to visualize the goal at which utilities are aiming—the availability of their service to every community and neighborhood. They should understand that huge sums must be provided as capital for the development and extension of utility plants, and that capital, as well as men, is entitled to fair pay and cannot be attracted to the utility industry unless it receives a reasonable rate of return. They must also be familiar with the many utility requirements of various communities and see to it that these requirements are met by the utilities so far as it is physically or financially possible. They must insist that utility rates be as low as efficiency, cost of production and reasonable return on investment will permit. These two points of view are essential in utility regulation both to the public and the utility. No utility can thrive unless it has the good will of its public and no community can prosper unless it is adequately and uninterruptedly served by its utilities.

There is a better understanding of these facts today than ever before and consequently there is less friction between the utiilties and the public and a greater friendliness of the public toward the utilities. Good will and good service go together and each is dependent upon the other. You cannot give good service if your public is constantly hampering you with restrictions which prevent development and if you do not give good service you cannot have good will.

These fundamental facts are generally recognized today as never before. Utility managements are showing a greater eagerness to win public good will than can be found in any other industry. The old "public-be-damned" policy has completely disappeared. The motto seems to be "now it can be told."

Only to the extent that you maintain this policy and keep faith with the public will you succeed. No aggregation of publicity men and no political wire pulling can save you from disastrous results if the people get the impression that you are misrepresenting facts or trying to take unfair advantage.

Public ownership is coming rapidly, but it is coming in a way never anticipated in those early days. It is now called customer ownership and employee ownership. Every year sees a larger distribution of utilities securities among small investors. The soundness of the business has become of as vital importance to the community as to the utility managements, not only because of the fact that service can only be rendered by an efficient organization, but also because so large a proportion of the people of the community are interested in the financial soundness of their investments in these securities.

As the average citizen becomes more familiar with the investments in securities of corporations and as the utilities see more clearly the value of customer ownership, the day approaches, I am firmly convinced, when most of the stockholders of your companies will be the people who use your service. When that day comes, you will have found not only a new and important source of capital but in addition an understanding, helpful, and friendly public.

I am sure that you are upon the right track and if you continue to be honest with the

(Continued on page 318)

# Gas Research Develops Radically New Brass Melting Furnace

By ALEXANDER FORWARD

**A radically new type of brass melting furnace has been developed as a result of the American Gas Association's half-million dollar program of industrial research. For the first time in the history of the brass industry, the fragile and crumbling crucible and refractory lined furnace have been supplanted with a permanent retort of special alloy metal, apparently of indefinite life. Its advantages are summarized as follows:**

**Astoundingly low fuel consumption of only 2½ cu.ft. of gas a pound of brass melted, superseding other fuels.**

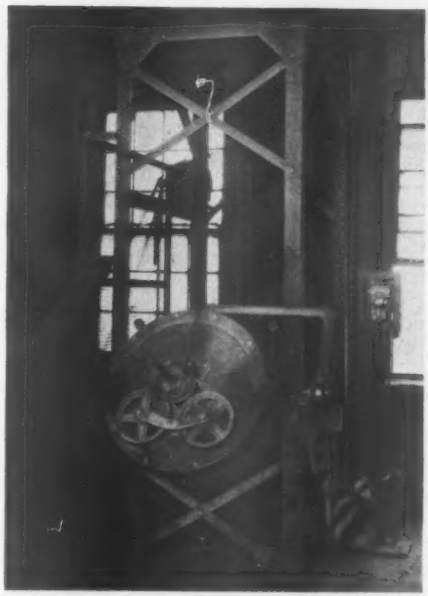
**Practical elimination of metal losses during brass melting.**

**Apparent elimination of the costs of crucible and refractory maintenance.**

**Automatic temperature control.**

**Greatly improved working conditions in foundries, resulting in labor saving, greater efficiency of workers and avoidance of excessive heat, noise and fumes.**

**This discovery was brought about by the American Gas Association's plan of cooperative research, efficiently administered under the direction of the Executive Board, by the Industrial Gas Research Committee, of which F. J. Rutledge is chairman and E. D. Milener, of Association Headquarters staff, is research representative. It bids fair to revolutionize practice in the more than 3000 foundries of the United States and Canada where brass is melted.**



*New gas retort brass melter developed by A. G. A. research installed in plant at Trenton, N. J. The tilting arrangement is temporary*

THROUGH cooperative research, sponsored by the American Gas Association, there has recently been developed a radically new type of brass furnace, which through its greatly improved efficiencies including decreased fuel, maintenance and labor costs, reduced metal loss, increased output and improved castings, bids fair to revolutionize the brass foundry industry. For the first time in the history of the brass industry the short lived crucible and refractory lined furnaces have been supplanted with a retort of special alloy metal apparently of indefinite life.

Furthermore, foundrymen have never before known how to avoid the great loss of metal in brass melting, nor the heavy cost of crucible maintenance, and have been at a loss as to the most economical fuel to use. In many types of furnace, metal losses during operation equal or exceed the cost of fuel, whether gas, oil, or coke.

The development of a metal alloy that would withstand working temperatures in excess of 2000 deg. F. repeatedly, in contact with molten metal, was a part of the research program, and while crucibles have a life of only about 15 or 20 heats, a single retort made from the alloy finally produced has already served for more than 250 heats and is none the worse for wear. The research in connection with the development of this equipment was done under contract between the American Gas Association and the American Gas Furnace Company, of Elizabeth, N. J.

*Brass from gas melter is being poured from the crucible that is used as a ladle. Compare with the picture below*

This new brass melter consists of a revolving metallic retort, externally fired and enclosed in a shell heavily insulated and refractory lined for heat concentration, atmospheric control, and fuel conservation. The insulated sheet steel drum or shell is mounted on two bearings held by a steel frame so that it can be tilted at any desired angle. Ten gas burners, five on each side, are mounted on this drum in such a manner that they fire into its interior. Within the drum is the special alloy metal retort so mounted that it revolves with a motor and variable chain and gear drive.

Air under pressure for combustion is supplied to the gas lines serving the burners and the gas-air mixture can be so regulated as to provide any desired atmosphere—oxidizing, reducing, or neutral—within the combustion chamber, which is the space between the shell and the retort. In this case a slightly reducing atmosphere is maintained so as to prevent oxidation of the retort.

A thermocouple projects into the combustion chamber and is connected with a temperature control and recording pyrometer and in this manner the temperature of the furnace is maintained automatically and regardless of the operations of pouring and recharging. The frame containing the fur-

*The twelve oil-fired crucible furnaces. Compare with picture above for contrast*

nace is fabricated from structural steel members and a chain hoist is used for tilting, but in the later designs this is obsolete and a much neater setup is provided.

The first of these to be used in commercial practice was installed at the plant of the Trenton Brass & Machine Company, Trenton, N. J., a firm manufacturing plumbers' supplies and selling direct to jobbing plumbers and makers of sanitary ware. The various articles here are cast from commercial bronze and yellow brass compounded in the melting furnaces and poured direct.

It was indeed fortunate that this particular foundry was the first to try out the new gas furnace for besides being one of the oldest, most progressive and best managed foundries, it had used every kind of fuel and energy and every type of brass melting furnace in an effort, prolonged over many years, to reduce melting costs to a minimum and obtain the best possible control over its foundry practice and the final quality of its castings.

The plant and equipment of this company are housed in a three-story building, 40 x 275 ft., with the foundry on the top floor. Prior to the innovation of the new gas melter, coke-fired pit furnaces, gas-fired furnaces, and electric furnaces had been rigidly tried and discarded, and the oil-fired crucible furnace had been standardized upon.

There are twelve of these crucible furnaces located at one end of the foundry in three rows, and inasmuch as they represent the best foundry practice which the management of this concern has been able to effect over a long period of many years, they afford a most valuable yardstick with which to measure the economies of the new gas melter. Furthermore, the same foundry practice is used with both so there is no chance for variables to enter.

The practice is as follows: The flasks are made up on air molding machines, 16 in number, arranged along one side wall, and the pouring floor occupies that part of the room immediately adjacent. At the other end of this pouring floor and line of molding machines is a circular pouring unit consisting of two small and parallel steel rails, about six inches apart and a foot above the floor, forming a circular enclosed track, approximately 32 ft. in diameter. Within the circle are four mechanical molding machines and after the flasks are made up on these they are transferred to the tracks where they remain stationary during the pouring and cooling.

The principal feature of this pouring unit is an exhauster for the zinc oxide fumes, consisting of a post in the center which carries an overhead pipe to a point directly over the track and to which is fitted a hood. In addition there is a chain hoist with a pouring shank which holds the crucible at any desired height or position above the flasks, and while pouring, the injurious fumes are kept within the hood and exhausted through an extension of the pipe through the roof.

This exhauster rotates with the center post so as to cover the entire circumference of the circular track. From 500 to 600 flasks can be made up and poured on this unit daily. Both this unit and the conventional pouring section are served with an overhead monorail system direct from the melting furnaces. With this system of handling, a pouring schedule very closely synchronizing with

## NEW FURNACE ELIMINATES FOUNDRYMEN'S MALADY

**THE newly-developed gas-operated furnace, which promises to revolutionize brass melting, will also eliminate the malady of foundrymen which is known as "the shakes."**

**"The shakes" is a disease which comes from inhaling the fumes of zinc, which is melted with copper in making brass. Since Biblical times this brass mixture has been heated in open pots, so that the poisonous fumes permeated the surrounding atmosphere. While recently devised electric furnaces were an improvement, the new gas furnace is completely sealed and is decidedly better than any other crucible.**

**The "shakes" is not classed as a fatal illness. However, its symptoms are the same as those of pneumonia, and the disease resembles pneumonia for several days. After that the patient usually recovers rapidly. Brass foundrymen tell of physicians who are not familiar with the "shakes," who put their patients to bed for pneumonia.**

*Here it was proved that the machining qualities of brass from the gas furnace were superior to those of brass from the oil furnaces*

the heats is possible. The core room is at the further end of the main room and is equipped with gas-fired ovens in which the cores are baked.

Probably the greatest service rendered by this new gas furnace, aside from the elimination of crucible and refractory maintenance and remarkably low fuel consumption, is the exclusion of metal losses through volatilization and oxidation while the charge is being melted. With the best practice that can be obtained with the crucible, the volatilization losses run between five and six per cent, and each crucible, as it is pulled from the furnace, has to go on the skimming table and be skimmed of the oxidized metal before it can be taken to the pouring floor.

Almost all of the composition used in the castings here is a yellow brass containing 72 per cent copper, 1½ per cent tin, 1½ per cent lead, and the remainder, approximately 25 per cent, is zinc. The zinc has a very much lower melting point than the copper and when melted in the presence of air, volatilizes readily and this action causes a very material loss of zinc metal from the original charge. Consequently, the resulting castings vary in chemical analysis from heat to heat, day to day, and month to month. To eliminate this and the oxidation loss the retort of the gas melter is fitted with an air-tight cover which is bolted on securely.

Of course, when a new charge is put in, certain gases are given off of which the retort must be relieved, and this is accomplished through a short pipe which is a part of the cover. As soon as these gases start to form, they are lighted and allowed to burn at the end of this pipe. In a few minutes they are exhausted, the flame extinguished, and the operator thereby knows that it is time to screw the air-tight cap onto the end of the pipe, thus sealing the entire retort charge from the outside atmosphere.

With this method of melting, the only losses are during the pouring operation and are so minimized that there is hardly any variation in the chemical analysis of the resulting castings. Furthermore, a more homogeneous casting is produced and one that is more easily machined than those made from crucible metal and at the same time the physical characteristics remain unchanged.

The astounding low fuel consumption of 2½ cu.ft. of gas per pound of brass melted is one of the principal achievements of this furnace. Other economies effected include a considerable labor saving and faster heat transfer which reduces the melting time and assists in lowering the fuel requirements. There is still another appreciable fuel saving from the fact that 800° of heat remain in the retort in the morning (except Monday). Inasmuch as this gas furnace is smokeless, fumeless, noiseless, and gives off only a small amount of heat, the working conditions of the foundry are much improved, which adds materially to the efficiency and industry of the operators.

The machine department of this plant is located on the second floor and is completely equipped with threading and tapping machines, millers, drill presses, speed lathes, turret lathes, etc. All work incidental to the completion and the finishing of these parts is performed here.

The plating, polishing, and buffing departments, as well as the assembly and shipping rooms, are on the ground floor. In plating, copper and nickel are used. Inspection includes testing with water at 80 lbs. and air at from 40 to 100 lbs. pressure. The volume and diversity of castings turned out at this plant can be partially gauged from the fact that there are between 2000 and 3000 patterns in active use.

# Cost Accounting—Its Rightful Place in Utility Management

By E. H. SELBY

**This article was prepared by Mr. Selby for the A. G. A. Accounting Section Committee on the Cost of Operating Motors and Mechanical Equipment.—Editor.**

*E. H. Selby*

NO longer can the public utility be regarded as a monopoly industry. True, its franchise protects it from direct competition with utilities of the same class. Nevertheless it is clearly recognized throughout the gas industry that this fuel must compete directly with other heating agencies and must establish its superiority over them if the industry is to continue to flourish.

Recognition of this fact has led to closer cooperation of all concerned. The manufacturers of gas have welcomed into their association the producers of natural gas. The New England gas companies have joined hands in a regional cooperative advertising program to increase the use of gas as a fuel. There is a discussion at present of a national advertising effort along the lines taken by the New England operators. There is much thought and discussion devoted to the best methods of appliance merchandising, particularly as to industrial and home heating appliances. Appliance manufacturers and gas men meet to discuss jointly the problem of promoting the sale of appliances. The testing laboratory at Cleveland witnesses the desire of manufacturer and utility men to give the public the best appliances for burning gas. The competition is being met by counter-attack with the weapons of service and price. The aim of the industry is to provide the best service at the lowest cost.

What part does cost accounting play in this competition? Obviously, it cannot lend anything directly to the quality of service; it can, however, exert a real influence on the cost of service. So far as it does exercise such an influence, it is a very useful tool of management. The governmental regulatory bodies determine the upper level at which the utility may sell its product, but the efficiency of the management plays the leading part in setting the lower level. If the alertness of the management results in lowered operating costs, the resultant saving can be passed along to the public by voluntary rate reduction. Lowered rates stimulate use of gas for house heating and industrial purposes. To reduce expenses to permit lower rates, the executives must know exactly what their costs are, what they consist of. It is the sole purpose and function of cost accounting to supply these details, and to supply them in a form in which they may be understood by the man who is unfamiliar with accounting methods and terminology.

First of all, it is very desirable to know each month how much it costs per M cu.ft. to produce gas, to be able to compare that cost with the cost in the preceding month, the previous months of the current year and in the previous year. After noting the variations between periods, the executive can put his finger on the point or points at which they occurred. Perhaps the increase or decrease in cost is due to the operations of the production department, the transmission or distribution departments. Maybe the commercial or new business departments are responsible. Going further into the details, it may appear that shop expenses have increased due to idle machinery, idle labor, worn-out tools. Perhaps the cost of installing, handling, or repairing of meters or appliances is out of line.

Cost accounting will supply this information and much more. Each item of operating expense may be broken down into its component parts. The cost accountant presents the data in report form which is in-

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telligible to the management. He goes further, when desirable, and interprets the facts presented. Given such reports, how is the executive to determine where his costs may be brought down?

First, by comparison of the expenses of the period under consideration with those of the preceding period or periods. Fluctuations of the various expense items call attention to themselves.

Second, by comparison of the costs of the current period with standard costs predetermined upon a basis of operations at normal capacity.

Third, by comparison of certain groups of expenses of his company with those of other companies through the medium of the American Gas Association. This implies the existence of a uniform classification of accounts and uniform interpretation thereof. Whereas such is the case as regards the general accounting structure, there is room for a great deal of development in the cost information collected by the member companies. The worthwhileness of exchange of cost data cannot be doubted, and it is to be hoped that a far greater degree of uniformity will be adopted to make inter-company comparisons possible.

Fourth, the accumulation of cost data is a condition precedent to the adoption of a budget system. Without going into the merits of budgetary control, it not only serves to control and coordinate the various activities of the business, but also serves to draw attention to costs.

Fifth, the management must be careful at all times to have on hand accurate and detailed cost records on all construction work. These costs are capitalized and may be examined by the commissions from time to time in rate investigations. Exact knowledge of such costs is not only desirable but imperative.

The Accounting Section of the American Gas Association has taken active steps in the past three or four years to bring to the attention of the industry the usefulness to the management of adequate, uniform, cost information. In 1926 a committee was appointed to study and prepare a uniform classification for the cost of operating motors and mechanical equipment. That classification has been prepared and accepted, and the committee is endeavoring to educate the industry in its use.

A similar step has been taken in the past year in the formation of a joint committee composed of men from the Commercial and Accounting Sections to prepare an adequate classification for merchandise accounting, taking into consideration the requirements and policies of the Commercial Section and management with regard to merchandising. The preliminary report of this committee, presented at the Spring Conference of the Accounting Section, held in Chicago, March 21 and 22, 1929, was received with a very encouraging display of interest, resulting in a lively discussion of principles involved and present practices of member companies. A representative of the Commercial Section pointed out the need for an adequate classification of merchandise accounting from the standpoint of the commercial men. He said, in substance, that the primary need was for accurate information comparable between companies which would not only enable the sales executive to judge the comparative performance of his own organization, but also would stimulate the efficiency of all members participating in the exchange.

Thus, more and more cost accounting takes its rightful place as a tool of management in the utility industries. It reveals the deficiencies in operations which, once revealed, may be corrected, and provides a basis for planning future operations.

It is not a panacea for mismanagement but, within its province, aids the utility executive in so controlling his operating expenses as to meet the keenly competitive conditions of today.

## Here It Is in Verse Form!

Palmists, they can read our hands;
Graphologists, our writing;
Phrenologists can read our skulls,
Including bumps from fighting.
They learn a lot about us
When they read our hands and domes;
But not as much as gas men
Who read meters in our homes.

—R. C. O'Brien, in Judge.

# The Utility Industry Is a Trusteeship, and Not a Trust

By OSCAR H. FOGG

I HAVE been asked to refer briefly to the Federal Trade Commission's investigation of the public utility situation, and more particularly to the treatment accorded the facts adduced in those proceedings by a certain section of the press.

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*Today the man on the street is an investor in corporate enterprise. His opinion is the criterion—not the opinion of the agitator*

Of course you all know that the Commission has not yet completed its investigation. The case is not all in. Only the first phase of it has been dealt with so far—that having to do with the affairs of the various utility associations and the so-called propaganda activities of the commitees on public utility information, which, as we know, have done such constructive work in many sections of the country.

Before the hearings are ended the utilities are to be given an opportunity to present their side. Then, and only then, will the complete picture be revealed.

However, I believe that a careful examination of the record to date will show that, except for occasional and detached instances of thoughtlessness or misdirected zeal, the conduct of the utilities has been of a high standard, and our appreciation of our responsibilities to the public such as to merit respect.

But a little group of vociferous agitators and a certain but fortunately small section of the press would like the public to believe otherwise, and to picture the utilities as more or less generally engaged in carrying insidious propaganda into the schools and colleges, debasing the press, and lurking in the shadow of bad faith.

Certain fragmentary parts of the testimony have been wrenched from their setting and played up as evidence of concerted and widespread wrong-doing by that imaginary monster, the "power trust," whereas in fact such examples are rare, sporadic, and altogether exceptional. Mistakes have been made, of course, but "be who never made a mistake, never made a discovery;" in fact, never did anything at all.

If a few overzealous representatives of the utilities have been guilty of indiscreet acts or utterances, let us not, in all conscience, allow these to blind our eyes to the great constructive work that has been done, as attested by countless examples brought out in the same testimony. The utilities have to their credit a fine record of straight-forward, factual publicity, such as that which has distinguished the work done here in Oklahoma, for example, and elsewhere—all of which has helped to give the American people a true picture of our public utility services, and established for them a character and reputation for honest purpose and wholesome dealing that even the most ruthless assaults can not destroy. Unfortunately, it is not the normal but the abnormal that too often is singled out for exploitation by certain sections of the press. One effect of this, of course, is to bring into sharper relief the attitude of those fair-minded journals

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and individuals who, while condemning excesses and abuses, as we all do, yet retain their sense of proportion and do not pronounce blanket judgments on a few scattered and isolated facts.

*Good service is the watchword of the utility industry—the abolition of smoke is a by-product of this service*

Being quasi-public corporations, the utilities are more in the public eye than are strictly private corporations, and are therefore more exposed to public comment and criticism, as well as to attacks by the ignorant, the misguided, and the malicious. These are the penalties of our position; we cannot escape them. What we can do is not to deserve them. We cannot and do not object to having our affairs subjected to the closest examination by properly constituted agents of public authority, nor to any investigation which seeks to bring out fairly and impartially all of the facts of any situation.

I should like at this point to quote briefly from an address by Hon. Geo. B. Cortelyou, Chairman of the Joint Committee of National Utility Associations, delivered at the annual convention of the American Gas Association in Atlantic City last October. He said:

"There is neither a power trust nor a power lobby. There has not been, nor is there today, any effort, concerted or otherwise, upon the part of the utilities to distort or misrepresent their policies or their accomplishments. Their critics have been unable to disprove either the statements or the statistical data embodied in their publications. In respect of their factual accuracy and adherence to truth, these publications differ strikingly from the outgivings of some of their politically-minded opponents.

"Whenever an investigation of utility affairs discloses the existence of practices that are at variance with the spirit of American institutions, the industry will be the first to condemn them and to demand their suppression. The Joint Committee holds no brief for any individual or company whose acts do not square with this standard, and in stating its position in this regard it is convinced that it represents the aims and purposes of the utility industry."

Realizing that five months or so have elapsed since that statement was made, I asked Mr. Cortelyou just recently if the developments since then suggested any further comment. His reply was: "Say to my friends in Oklahoma that developments have only served to strengthen and confirm what was said at that time."

At the same convention it was our good fortune to have Walter M. Harrison, a citizen of this State, and a distinguished journalist, address our members. Mr. Harrison, who, as you know, is the President of the American Society of Newspaper Editors, as well as managing editor of the *Daily Oklahoman* and the *Oklahoma City Times*, was unsparing in his remarks, as we asked him to be, and gave us what I am sure was a fairly representative cross section of editorial opinion respecting certain phases of public utility publicity.

Mr. Harrison's address was one of the outstanding contributions to our program and it deservedly attracted the widest interest and attention. In it was contained some very sound and constructive advice to public utility men as to their proper and desirable attitude and relation to the press.

Now it is not detracting a particle from the value of that advice to say that it embodied the essence of what our enlightened public utilities (and I think that means nearly all of them) have long accepted as essential to the successful conduct of their business—and that is, unswerving straightforwardness, in all their dealings and relations, not only with the press, but with the public, too.

But it is to the code of ethics—the "Canons of Journalism" set forth at some length by Mr. Harrison, that I would particularly draw your atention. Not only are these such as to command our respect—they deserve our militant support, and it is a

duty and a responsibility that falls on all of the utilities alike, so see that neither enthusiasm nor misdirected zeal nor any other impulse ever causes them to overlook or take lightly a single one of these ethical concepts. We owe that to the decent, honest press of the country, the great body of newspapers, which, true to the fine traditions and high ideals of the profession, sincerely aim to give their readers an unclouded, unprejudiced view of the facts.

We owe that to the press We owe it no less to ourselves.

With that standard rigorously maintained, I think we need not give ourselves too much concern about what I have spoken of as "a certain other section of the press." It will be a dull world when everyone is perfect. In this one, only our critics enjoy that bliss. Let us leave them in rapt contemplation of their own perfection.

We in the utility business are not interested in tearing down. Ours is the happier task of building up—and among our opportunities to do so is that of helping to restore to its proper place in the vocabulary of the people that much maligned word "propaganda." I know we didn't put it where it is—it took a war and a good many other things to do that—but it is interesting to observe the growing recognition that as a word it has been pretty badly treated. For example—the *Scientific American,* in an issue of some time ago. entered a plea "for the restoration to respectable usage, of that fine old word—propaganda."

Even though we had no part in its downfall, we can help to lift it up. I am not going to burden you with the dictionary definitions but I do commend to your attention that interesting book entitled "Propaganda," by Edward L. Bernays, from which the following is taken.

Mr. Bernays says—of propaganda—that:

*If this be propaganda—make the most of it*

"Virtually no important undertaking is now carried on without it, whether that enterprise be building a cathedral, endowing a university, marketing a moving picture, floating a large bond issue, or electing a president . . . The industrial interests can furnish to the schools, the colleges, and the postgraduate university course the exact truth concerning the scientific progress of our age.

"They not only can do so; they are under obligation to do so. Propaganda as an instrument of commercial competition has opened opportunities to the inventor and given great stimulus to the research scientist. . . . Propaganda assists in marketing new inventions. Propaganda, by repeatedly interpreting new scientific ideas and intentions to the public, has made the public more receptive. Propaganda is accustoming the public to change and progress."

Obviously there is nothing inherent in propaganda that justifies the stigma which has been placed on the word. The legitimacy of its use, therefore, must be contingent on the character and honesty of the cause which it seeks to advance as well as the methods by which it is carried on.

With this fact in mind, we of the utility industries can, with clear conscience and earnestness of purpose, avow our belief in the principles and policies of our business by using every proper agency of advertising, publicity, and propaganda in making it better known and understood by our fellow citizens in every walk of life, assuming in every case direct and unequivocal responsibility for every statement we make.

As the services of our utilities grow in complexity and importance, owing to the urgency of public demand, we shall become accustomed to the cry of the radical on his soapbox and to the bleat of a certain type of mind which, as Roy W. Howard of the Scripps-Howard newspapers aptly expresses it, "mere magnitude in an enterprise suffices to terrify."

We are charged with the crime of being big—but the utility industry of today *is* big, and properly so, because it rests on a base of almost universal service. Under such circumstances, great size is not an end in itself but rather a reflection of the intimate relation between utility service and the prosperity and progress of the nation.

There is one other thing that is working in our favor, however, and it is that one thing which the professional detractor has overlooked. The bigness of public utility service has been created largely by the people themselves. Those who have attacked us as a "trust" find the ground taken from under their feet by the sudden realization that this "trust" is really a *trusteeship* of millions of wage earners, families, and business men in every section of the country.

The records show that during the past ten years the number of stockholders in public utility companies alone has tremendously increased, in addition to which millions of dollars of public utility stocks and bonds are owned by life insurance companies, savings banks, and other guardians of the people's funds.

Positions of power and preferment may be won by favor, but there is only one thing that makes an investor and that is confidence.

The people can be trusted to look after their own interests when they know where those interests lie. Twenty years ago the average man gave little thought to his gas or electric service except as he hoped to reduce his monthly bill. Today he is an investor, and, as a writer in the *New York Times* recently expressed it, "the butcher, the baker, and candlestick maker are beginning to bring critical analysis to bear on the views of agitators against corporations, however small their portions of interest in them may be."

This idea is well summed up in the words of a recent editorial of the *Philadelphia Bulletin,* which states that:

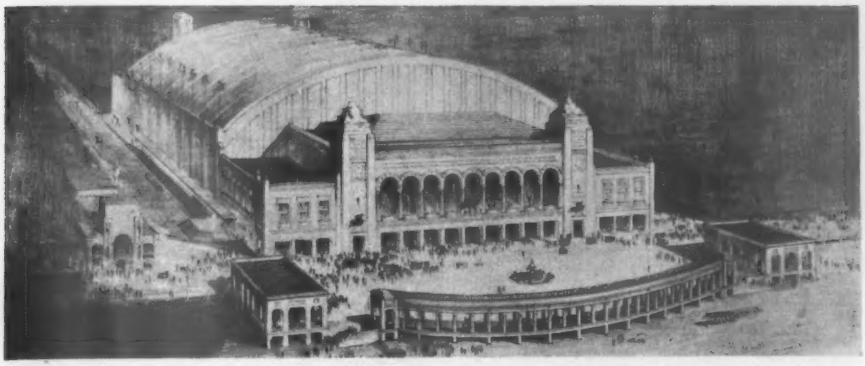
> "The people of the United States in 1929 are not fearful of Big Business. It cannot even be said that they are prejudiced against it. They have become better acquainted with it. By tens of thousands they are each year becoming stockholders in it. This popular stock ownership has had a distinct influence on the attitude of the public toward the big corporation and also on that of the big corporations toward the public."

The public will do its share if we do ours and see that it has full and accurate information about the problems, aims, and progress of our business.

I have said that the code of ethics of the reputable press commands not only our profound respect but our militant support. Let me say also that, having an abiding faith in the integrity of our utilities, I earnestly believe that the ideals that guide their relationships to both the press and the public are no less lofty.

It is to that end that we have been building—and I believe we have done well. But nothing we do is good enough—there is nothing that we cannot do better.

And so, to merit and to hold our high place in public regard—we must continue to build—always more firmly—with honest purpose—and with steadfast integrity, our guiding principles.



*The new auditorium in Atlantic City*

# A. G. A. Will Hold 11th Convention in Atlantic City, Oct. 14-18

THE eleventh annual convention of the American Gas Association will be held in the municipal auditorium, Atlantic City, N. J., October 14 to 18, 1929. This announcement is of particular significance to the entire gas industry as it presages a convention and exhibition which will far eclipse anything held in the past.

The convention and exhibition will be entirely housed under one roof in the new auditorium, a picture of which is shown above. This auditorium occupies an entire block of seven acres. The appointments and fittings of the new building are absolutely the last word of their kind. Atlantic City has within recent years been the host to thousands of conventions, and all of the experience gained in this time has been drawn upon in designing and constructing the new hall.

In the June issue of the MONTHLY there will appear an article describing this huge auditorium. All the important facts will be brought out, including such information as the building containing the largest stage in the world, the largest pipe organ in the world, etc.

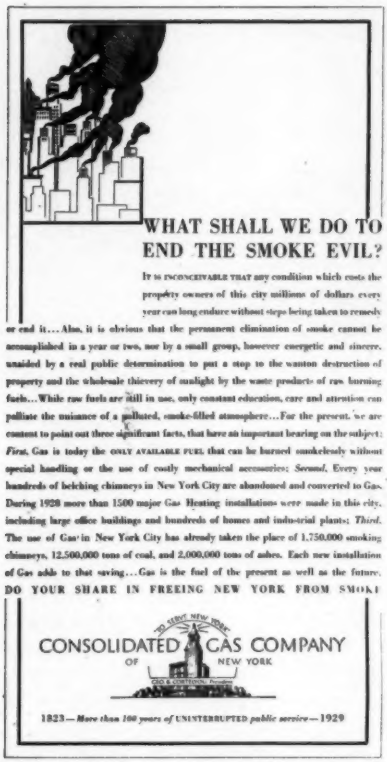
Of particular interest to the gas industry is the announcement that Atlantic City is planning a Golden Jubilee of Light. This will start with the opening of the hall in June and continue through the American Gas Association convention. A brilliant lighting display will be conducted throughout the entire resort and approaching highways. More complete information on this will be given in future issues of the MONTHLY.

This year the American Gas Association convention will have adequate space for its exhibitions and for meeting rooms. The detailed information regarding the exhibition is given elsewhere in this issue of the MONTHLY. The meeting rooms are all centrally located and all will be in the new auditorium, as already indicated. These rooms are well-equipped and easily accessible.

## German Ass'n Invites Americans to Convention

THE German Gas and Water Association, through its managing director, Karl Lempelius, has issued a formal invitation to the members of the American Gas Association to attend the seventieth annual convention of the German Association at Berlin, June 9-12.

President Fogg will be only too glad to issue credentials to the American Gas Association members who desire to attend. Credentials have already been issued to A. P. Brill, general manager of the Ruud Manufacturing Co., Pittsburgh, Pa.


WHAT SHALL WE DO TO END THE SMOKE EVIL?
IT IS INCONCEIVABLE THAT any condition which costs the property owners of this city millions of dollars every year can long endure without steps being taken to remedy or end it... Also, it is obvious that the permanent elimination of smoke cannot be accomplished in a year or two, nor by a small group, however energetic and sincere, unaided by a real public determination to put a stop to the wanton destruction of property and the wholesale thievery of sunlight by the waste products of raw burning fuels... While raw fuels are still in use, only constant education, care and attention can palliate the nuisance of a polluted, smoke-filled atmosphere... For the present, we are content to point out three significant facts, that have an important bearing on the subject: *First*, Gas is today the ONLY AVAILABLE FUEL that can be burned smokelessly without special handling or the use of costly mechanical accessories; *Second*, Every year hundreds of belching chimneys in New York City are abandoned and converted to Gas. During 1928 more than 1500 major Gas Heating installations were made in this city, including large office buildings and hundreds of homes and industrial plants; *Third*, The use of Gas in New York City has already taken the place of 1,750,000 smoking chimneys, 12,500,000 tons of coal, and 2,000,000 tons of ashes. Each new installation of Gas adds to that saving... Gas is the fuel of the present as well as the future.
DO YOUR SHARE IN FREEING NEW YORK FROM SMOKE
CONSOLIDATED GAS COMPANY OF NEW YORK
1823—*More than 100 years of* UNINTERRUPTED *public service*—1929

*The typography of this advertisement is so excellent that a writer in Printed Salesmanship magazine has recommended it for the next Harvard Advertising Award for typography. Mr. Schiller writes that "the advertisement demonstrates advertising typography at a high level; it is creative because the type is used with intelligence to form a powerful design."*

## 100 Attend Metropolitan Industrial Meeting

NEARLY 100 industrial gas sales engineers gathered in the auditorium of the Consolidated Gas Company of New York on Thursday, April 11, eagerly listened to a group of heat and combustion experts, and earnestly discussed a number of phases of the subject of building up a greater industrial gas load. The occasion was the second general meeting of the Metropolitan Industrial Gas Sales Council, and the men present represented eight gas companies in New York and vicinity. The Metropolitan Industrial Gas Sales Council is affiliated with the Industrial Gas Section of the American Gas Association, and its yearly general meeting serves as a splendid vehicle for every man on the firing line in the metropolitan area to learn what is going on, and how his territory can be worked to better advantage.

The subjects discussed were timely, the speakers were men of experience in various activities connected with building industrial gas loads. The papers brought forth an unusual amount of discussion. There was much more discussion from the floor than is usual at such gatherings and it was clear that the field men were determined to clear their minds of any doubts as to how industrial gas prospects should be tackled.

There were three subjects that stood out prominently during the morning and afternoon sessions. They were the practical use of surveys, practical use of industrial gas research, and practical ways of holding existing industrial gas loads. H. A. Sutton, of The Public Service Electric and Gas Co., outlined how his company had used the survey conducted to determine the extent and availability of industrial gas business in the territory served. He was followed by Public Service field men, who showed how they were able better to utilize their time and salesmanship by following the courses charted by the survey.

That the industrial gas sales engineers responsible for load building in certain clearly defined districts value the backing that they receive from the industries' industrial gas research movement was brought out by the enthusiastic reception accorded the paper on "A. G. A. Industrial Research, Progress and Results," delivered by Eugene D. Milener of the A. G. A. Headquarters Staff. The discussion which followed indicated that the subjects which the A. G. A. Research Committee is working on are the subjects the district sales engineers consider of the most importance in building the industrial load. The meeting endorsed the progress that was reported in the research work in the various projects.

J. F. Reeder, of the New York and Richmond Gas Co., in his interesting paper, "Holding Present Business," emphasized the basic value of present business in any program of load building. This thought was also elaborated on by C. E. Muehlberg, R. H. Staniford, and J. J. Jares.

The Council was welcomed to New York by N. T. Sellman, assistant secretary of the Consolidated Gas Co., who spoke of the work being done in industrial gas research. Through the courtesy of Henry Obermeyer, the recently colored moving picture, "Doing It Better with Gas," was shown.

A. J. Peters, Chairman of the Metropolitan Industrial Gas Sales Council, presided at the sessions.

# Accountants Hold Successful Conference

THE rapid expansion of the many important activities of the Accounting Section of the American Gas Association was reflected at the first annual Spring Conference of the Section held at the Hotel Stevens, Chicago, Ill., March 21-22. This conference was designed to take the place of the annual Spring committee meetings which were held, and to give all the committees a chance to report progress on their reports for the year. Since there has been increasing difficulty every year to provide for all of the Sections' activities at the annual convention sessions in October, the Spring conference gave ample opportunity to discuss problems which would not be brought up otherwise because of time limitations. Since the papers were all progress reports, it is possible to give here only a brief summary of each.

*F. H. Patterson*

*Edward Porter*

Arrangements for the conference were made by Edward Porter, of Philadelphia, Pa. F. H. Patterson, of Rochester, N. Y., as Chairman of the Section, presided.

Following the warm address of welcome by W. A. Sauer, of Chicago, Ill., H. C. Davidson, of New York, and Chairman of the Joint Committee on Merchandise Accounting, presented a talk on "Merchandise Accounting as it Affects the Problem of the Commercial Section." Mr. Davidson quoted the two internal aspects of the question as: 1. In relation to management and departmental operation, adequate records of merchandising activities, financial and statistical, are a fundamental requirement, and 2. In relation to promotional or new business activities, merchandising is so interwoven with expenditures designed to bring future benefits to the sale of gas that it is difficult even for the company executive to unscramble them, to say nothing of the confusion that may be in the minds of the public.

He also stressed the service the accountant can render and said that the committee was asking for the interest and assistance of the Section towards a better understanding of the elements of cost, and more correct treatment of cost in accounts. The committee also asked for criticisms and suggestions as to the best manner of presenting the subject to the public.

W. R. Evans, of Chicago, Ill., vice-chairman of the committee, then talked briefly on the same subject and made a plea for adequate and accurate merchandising accounting. Mr. Evans also said that there was a primary need for information comparable between companies. He stated some of the policies of The Peoples Gas Light and Coke Company.

M. F. Reeder, of Chicago, Ill., also discussed this subject briefly, and brought to the attention of the Conference a proposed operating statement providing for the sub-division of the 614 Merchandise and Jobbing Account into the following accounts:

**Income from Sales**

1. Gross Merchandise Sales.
2. Less—Returns and Allowances.
3. Net Sales (1 minus 2)
4. Percentage of Returns and Allowances.

**Cost of Goods Sold**

5. Cost of Merchandise Sold.
6. Credit—cost of Merchandise Returned.
7. Installation Expense.
8. Delivery Expense.
9. Replacement Repairs and Expense.
10. Storeroom Expense.
11. Total Cost of Goods Sold (Add 5-10 incl.)
12. Gross Profit from Sales ( 3 minus 11 )

**Selling Expenses—Direct**

13. Salaries—Sales Managers and Office Clerks.
14. Salaries of Salesmen.
15. Commissions.
16. Rentals.
17. Supplies and Expenses.

18. Miscellaneous Expenses.
19. Total Selling Expenses—Direct (Add 13-18 incl.).

**Selling Expenses—Indirect**

20. Advertising Display and Demonstrations.
21. Miscellaneous Expense.
22. General and Administrative Expense
23. Total Selling Expenses—Indirect (Add 20-22 incl.).
24. Total Selling Expenses (19 plus 23).
25. Net Profit from Sales (12 minus 24).

Mr. Reeder said that the fundamental basis must be sales tickets. It is necessary to begin at the beginning and to educate the sales persons to prepare all transactions in the proper way. A particularly active discussion followed this presentation.

The next item on the program was "Developments in Office Labor Saving Devices and Billing Methods," by H. E. Cliff of Newark, N. J. This was a progress report on the punched card method of customers' accounting. Mr. Cliff discussed in detail the billing procedure in a central billing department, and stated that with a few minor changes the system might readily be extended to commercial office accounts receivable. In conclusion he stated that the punched card system has many advantages. He also said that there are certain disadvantages connected with the system. The committee plans to continue this study and hopes to submit a detailed report at the 1929 convention.

Harry Ellis, of Newark, N. J., addressed the conference on "Public Relations From the Distribution Engineer's Standpoint." Mr. Ellis confined his remarks in the main to the consideration of repair of customers' appliances. This report was in the nature of a tentative draft of the annual report. It provoked a great deal of discussion.

C. E. Eble, of New York, N. Y., was the next speaker, and he had for his subject "Cost Plus and the Lump Sum Contract in Relation to Fixed Capital Records." Mr. Eble discussed the functions of the accountant prior to the execution of the contract, and the contractors' overhead costs. He also showed an exhibit of coordinated account classification. The committee has made a study of the various classes of overhead expenses normally incurred during construction period, such as tools and implements, office expense, sundry expense, temporary structures, engineering, draughting and supervision, taxes and interest.

One of the most important papers presented at the conference was that on "Natural Gas Land Department Records," by J. W. Kidd, of Pittsburgh, Pa., chairman of the Section's committee on this subject. Mr. Kidd said that it was apparent that there is no uniform system of land department accounting in the natural gas industry. He submitted a brief statement of the work and duties of a land department, and discussed the records used and the procedure followed by one large gas company. The form of lease was taken up in detail as was also filing. He also discussed the lease record and industrial leases and deeds, agreements, rental payments, etc.

The report on "Gas Company Credits and Collections" was presented by J. G. Waddick, of Chicago, Ill., chairman.

The Second Day's Session opened with the report of the Committee on Public Relations, by E. P. Prezzano, Mt. Vernon, N. Y. Mr. Prezzano discussed "Getting and Keeping Close to the Customer." This was a very valuable address and brought forth a great deal of discussion.

The next item was the progress report of the Subcommittee on Training the Supervising Personnel, by Wm. Diehl, of New York, N. Y. This report is published in this issue of the MONTHLY.

The next paper was by D. H. Mitchell of Hammond, Indiana, who spoke on "Functions of the Auditor."

A progress report on the "Development of Accounting Office Personnel" was presented by H. B. Bergen, of New York, N. Y. This paper was a study of the merits of the various forms of incentive plans for development of the efficiency of office personnel. Mr. Bergen gave consideration to the various methods of developing incentive, and also to the methods of analyzing work and establishing position standards. He also discussed job analysis, position classification and compensation

(Continued on page 312)

# Gas Is the Automatic Fuel of the Automatic Age

By EUGENE D. MILENER

ONE of the most pronounced changes that is now taking place in the utilization of gas is the trend toward appliances and equipment that are automatic either in whole or in part. This movement has reached such momentum that it seems as though it is now part of the creed of modern designers to incorporate some automatic feature in every gas appliance built.

The movement toward automatic devices in the home and factory and on the farm is of course not confined to gas equipment. However, the gas industry is a leader in this direction, and a very large percentage of gas sold is ignited and burned, the flow is turned on and off by sensitive but sturdy devices which have been developed.

Gas appliances formerly were somewhat crude affairs. They were made of rough castings largely. Questions of high efficiency of operation and accessibility of parts for quick and inexpensive servicing received scant attention. The mere fact that the fuel used was flexible, clean, required no handling, and produced no ashes made any gas appliance a welcome change from the heating devices men and women had used and depended upon for generations. People thought nothing of striking a match every time it was desired to light a room or heat some water or fry an egg. The joy of seeing instantly a full-sized flame from applying that match was sufficient. No thought was ever given to timing devices and temperature controls. Everyone who used gas thought it was a wonderful thing actually to be able to turn the flame up and down at will. Factory heating processes were crude and for the most part depended upon the experience of those who operated furnaces and ovens, and hand-controlled gas equipment lent itself very well to this condition.

Probably the first important break from entirely hand-operated equipment was the introduction of the instantaneous gas water heater. The success of this appliance was based upon a snap action gas valve which controlled the temperature of the water and upon a gas valve that opened and closed as the hot water faucets were turned on and off.

The introduction of the instantaneous water heater had a remarkable effect. From a technical standpoint it introduced the pilot as a reliable device and proved that burning gas could be controlled from the temperature of the product being heated. In addition it utilized another source of energy for flame control, namely, water pressure.

With this beginning, progress was somewhat slow. But coincident with the strong demand of the public for greater ease and comfort in all things, a change in the whole attitude of gas appliance engineers was quite noticeable. They realized that gas was a source of heat that has unlimited possibilities, and that there are means of exploiting it that will always keep it well up in the lead as a domestic and industrial fuel. Newer ways of burning gas had to be devised to keep it in touch with the modern tempo. Chief among these newer ways of burning gas is the use of appliances that will work automatically. The automatic idea has been developed to such a point that it is now a consideration in the design of practically every type of appliance.

Temperature control has been the chief field to which automatic features have been applied. In the domestic division the instantaneous water heater has lost favor and in its stead we find the automatic storage heater. This widely used appliance depends upon a sensitive thermostat which keeps an insulated tank full of hot water ready to be

drawn upon at the slightest turn of the faucet. Thermostats and other automatic devices have transformed the gas range into a reliable cooking machine.

But temperature control was only the beginning. Research has produced the thermostatic pilot, which is entirely automatic and is a marked contribution toward safety in gas utilization, and has served to build a renewed confidence in the use of gas. These pilots are actuated from the heat of the burning gas itself. Other automatic devices on domestic gas appliances use still other forces to operate them. For instance, the size of the flame in a gas steam radiator is controlled by the pressure of steam inside the radiator. The steam acts on a diaphragm which reduces the flow of gas as the steam pressure goes up, the minimum flow of gas being reached when the steam pressure gets up to the maximum desired.

GAS FUEL speeds up traffic
All fuel used by your Gas Company for gas making is delivered by boat —none is carted through the streets
All fuel supplied to our customers is delivered underground — none is carted through the streets
Gas fuel leaves no ashes to be carted through the streets
use GAS the automatic FUEL

*The Consolidated Gas Co. of New York used this splendid window display recently. Certainly it would be difficult to find a more timely subject for New Yorkers. Thanks to Police Commissioner Whalen's commendable efforts. And gas, the automatic fuel, will help automaticize traffic*

Gas laundry dryers are now thermostatically controlled. This prevents overheating, provides for an air temperature that absorbs the greatest amount of moisture, and insures a minimum operating cost.

An entirely different kind of automatic control is used on gas incinerators. Here there is no need to control temperature as the maximum flame temperature is highly desirable. But it is necessary to turn the heat off after each charge of rubbish has been consumed. Consequently, gas incinerators are provided with a clock device that turns the heat off after the gas has been burning a certain number of minutes. No match is necessary in operating gas incinerators as a constant burning pilot is always ready to ignite the gas the instant it is turned on.

The outstanding example of automatic control in domestic gas equipment is in central house heating plants. Here the entire operation is completely automatic. In fact, it may be said that gas house heating is the most conveniently operated of all services in the home—more convenient than water supply because the faucets must be turned on and off by hand, and more convenient than electric lighting because lighting switches must be turned on and off by hand. Central gas heating plants utilize many agencies for automatic control. Room thermostats are actuated by the temperature of the room. Steam pressure is automatically controlled by diaphragms. The temperature of water leaving boilers and air leaving furnaces is controlled by thermostats, either electric or direct acting. Humidification is automatically controlled by water float valves. Thus the central gas heating plant draws upon several sources of energy to make the operation completely automatic. The forces drawn upon are changing temperature in the room, clock movement, water temperature, temperature in air ducts, steam pressure, flame temperature, city water pressure, gas pressure, central station electricity, and gravity. The remarkable thing is that research has been able to gather all these forces together and produce an automatic gas heating plant that is not unduly

(Continued on page 313)

# Long Distance Gas Supply in Germany

By J. KLAHR HUDDLE

**Mr. Huddle is American Consul, Cologne, Germany, and the material presented here is from one of his recent reports.**

SINCE the organization in 1926 of the "Aktiengesellschaft fuer Kohleverwertung," Essen, now registered under the name of "Ruhrgas—Aktiengesellschaft" (Ruhr Gas Company), for undertaking the supply of gas at long distance to the whole of Germany, the fight for and against the plans of this company has been going on incessantly. The leading Ruhr concerns, the holders of the stock of the Ruhr Gas Company, have entered upon the project of long distance gas supply for the purpose of disposing of their surplus for coking plant gas at a reasonable profit and having, in addition, a more extensive and profitable use for inferior qualities of coal.

The plan thus serves in the end to strengthen their finances and public influence, but the advantages offered to the public together with the possibility of augmenting the gas consumption are factors of general interest seemingly balancing the selfish aims of the Ruhr concerns.

Negotiations which for the past two years have been carried on between the Ruhr Gas Company and the several provinces and municipalities concerned have resulted in a number of contracts with municipal and other administrative bodies in the provinces of Rhineland, Westphalia and Hanover. The city of Cologne, at first opposed to long distance gas supply, demonstrating this opposition by the purchase of coal fields and the plan to build a coking plant, is now also understood to be prepared to accept any offer of the Ruhr Gas Company. However, the opponents to the Ruhr gas supply are no less numerous than those favoring the project. They are mainly found in Central, Southern and South-Eastern Germany, but even several cities in the southern part of the Rhine Province, though but of medium size, have shown no sympathy for the plans of the Ruhr Gas Company.

It was to be exepected that the plans and activities of the Ruhr Gas Company would give rise to amalgamations of gas supply interests in Southern, Northern, Central, and South-Eastern Germany under the original system of supply by means of gas plants. They have likewise caused important supply companies to extend and consolidate their operations. Thus, for instance, the Thuringtan Gas Company has organized, with the city of Coblenz as a partner, the Long Distance Gas Supply Company of the Middle Rhine and the Dessau Gas Company, the most important opponent of the Ruhr Gas Company, recently established the Gas Plant of Central Germany, Inc., and the Long Distance Gas Supply Company of Saxony-Anhalt.

In South-Western Germany there is to be organized the Long Distance Gas Supply Company of Baden, comprising the cities and communities of Baden, in order to examine the long distance gas supply problem. The city of Frankfort on the Main, which also owns coal fields, continues its policy of opposing the plans of the Ruhr Gas Company. The Free State of Wuertemberg has been divided into five "gas supply districts" and the Association of Wuertemberg Gas Plants, recently organized, is to consider the plan of "group supply" and the construction of a coking plant at Stuttgart. In Central Germany, companies have been organized at Halle, Nordhausen, Brunswick, Weimer, Zittau, Erfurt, etc., with the same object in view. All of these movements and plans furnish a rather solid foundation for the opinion that, at least in the near future, the Ruhr Gas Company, playing, as it does, the leading part in the gas supply of Western Germany, will have to overcome a good many difficulties in carrying out the plans of extending its interests further eastwards.

Discussing the operations of the Ruhr Gas Company since its foundation, it will be noted that its present system of supply has a length of 279.61 miles. The line to Hanover will be completed by the end of this year, so that the total system will then be 435 miles in length for an annual supply of from 850,000,000 to 900,000,000 cubic meters of gas.

## Enrollment in Home Study Gas Course Passes 1300 Mark

THE total enrollment in the Home Study Course on Manufactured Gas, which is offered by Columbia University in cooperation with the Committee on Education of Gas Company Employees of the American Gas Association, recently passed the 1300 mark and on April 11th stood at 1310.

Of this number, 377, or nearly 30 per cent, have already completed the work of the course. It has been estimated that since the course was started in October, 1925, the men enrolled in it have devoted a total of over 300,000 hours of study in fitting themselves to do their part in the development of the gas industry.

Judging from the enthusiastic letters received by Prof. J. J. Morgan, who is in charge of the course, these men are well pleased with their investment of time and money. It is safe to say that many of them are going to be heard from in the achievements of the next few years.

# 100 Attend Household Equipment Course at Purdue

By WILLIAM STOKES

IN cooperation with the School of Home Economics of Purdue University, Lafayette, Ind., the electric and gas companies of Indiana the last week in March acted as sponsors for a short course in gas and electrical household equipment at the University. Almost 100 women employed in the gas and electric business from Indiana, Wisconsin, Michigan, Illinois, and Ohio attended.

The course was planned primarily for women engaged in the gas and electric branches of the public utility industry in order to increase the knowledge of these women as to non-technical as well as technical information on the subjects of home economics, household equipment, and the general fundamentals of the utility business. Dean Mary L. Matthews, of the School of Home Economics of the University, was in active charge of the course. Manufacturers of household appliances sent liberal displays of their products for the week of the course.

Beginning with an address of welcome by Dean Matthews on Monday, March 25, the women attending the course were kept busy throughout the week with lectures, demonstrations and laboratory work. Many of the leaders in home economics of the country were present. Among the papers presented were:

"Aims of the Conference"—Miss Lois Anderson, chairman of the Indiana Division of N. E. L. A., Indianapolis; "The Romance of the Public Utility Industry"—Morse DellPlain, vice-president, Northern Indiana Public Service Co., Hammond; "The Future of Your Job in the Gas Industry"—Mrs. Anne J. Peterson, home service department, The Peoples Gas Light & Coke Co., Chicago; "Gas and Its Application to Household Appliances"—E. J. Good, Northern Indiana Public Service Co., Lafayette; "Gas for House Heating"—Prof. R. B. Leckie, gas research department, Purdue University; "Some Points in Making a Good Demonstration"—Miss Mary I. Barber, home economics department, Kellogg Company, Battle Creek, Mich.; "Cultivating Skill in Telling the Story of Gas and Electrical Equipment"—T. R. Johnston, bureau of publicity, Purdue University; "The Home-Maker's Use of Time"—Hildegarde Kneeland, Bureau of Home Economics, U. S. Department of Agriculture; "Why Save Labor?"—Dr. Grace S. Zorbaugh, Prof., Household Administration and Economics Science, Iowa State College; "Gas Water Heaters"—Waldo W. Schram, Northern Indiana Public Service Co., Hammond; "Reliable Sources of Information on Home Equipment"—Dean Mary L. Matthews; "Mechanics of Gas and Electric Household Refrigerators"—Prof. H. J. MacIntire, Department of Mechanical Engineering, University of Illinois; "Factors in the Management of Household Refrigerators"—Miss Ruth Jordan, Home Economics Department, Agricultural Experiment Station; "How Do We Decide What Labor Saving Equipment We Need in the Home?"—Eloise Davison, Home Economics Advisor, N. E. L. A.

In arranging the program and carrying out the work of the week, Dean Matthews had the assistance of Miss Miriam Rapp of the staff of the Agricultural Experiment Station of the University. Other members of Dean Matthews' staff also assisted in demonstrations and laboratory work.

Mr. Stokes is manager of the Indiana Public Utilities Ass'n.

# Clevenger Joins A. G. A. Staff as Director of Publicity and Advertising

*Mr. Clevenger*

ON June 1, Keith Clevenger, of The Empire Companies, Bartlesville, Okla., will become director of publicity and advertising for the American Gas Association, according to an announcement made by Oscar H. Fogg, President of the American Gas Association.

Mr. Clevenger is at present director of information service for the Empire Companies, a subsidiary of the H. L. Doherty organization. In this position he has directed public relations, publicity and advertising, customer ownership, stockholders' service, and other activities.

In making the announcement of Mr. Clevenger's appointment, Mr. Fogg said:

"We are indeed pleased to announce the selection of Mr. Clevenger for this important position at American Gas Association headquarters. He brings to the organization a wealth of varied experience that will be of untold value to the entire gas industry of North America. Mr. Clevenger has long been a prominent and active figure in the gas industry, and his advice and assistance have often been sought for committee and convention activities."

Mr. Clevenger was born in Yates Center, Kansas, on Jan. 14, 1887. He is a graduate of Kansas University, class of 1909, with the degree of LL.B. From 1910 to 1919 he was editor and owner of the *Osawatomie Graphic,* Osawatomie, Kansas. In January, 1919, he became managing editor of the Salina, Kansas, *Daily Union.* He was later made advertising manager of the *State Farmer's Union,* at Salina, and in 1920 became manager of the Kansas State Chamber of Commerce.

In 1921, Mr. Clevenger organized and directed the public relations department of the United Light and Power, United Telephone, and Associated Companies, with headquarters at Abilene, Kansas. In June, 1923, he became director of public relations for the Cities Service Gas Co., at Bartlesville, Okla., and served in this capacity until September, 1927, when he assumed the duties of his present position.

Mr. Clevenger is a member of the following organizations:

American Gas Association, Oklahoma Utilities Association, International Advertising Association, Public Utilities Advertising Association, Associated Industries of Oklahoma, Rotary International, Kansas Press Association, Free Masons, (Blue Lodge and Scottish Rite degrees).

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## Mid-West Gas Ass'n Favors Regional Advertising

THE Mid-West Gas Association went on record and voted unanimously to start a campaign of advertising in the district to arouse gas consciousness on the part of the public in the states of Minnesota, Iowa, Nebraska, North Dakota, and South Dakota. This was done at the recent convention of the Association.

A committee was appointed which will meet at once and formulate plans for the campaign. The action is the result of years of study and agitation among the gas men of the district.

The resolution passed was to the effect that: "The President is instructed to appoint a committee consisting of such members as he may decide on to study and devise a plan to advertise the gas industry in the district and to arouse gas consciousness."

The matter was presented to the Association by F. A. Lemke, of Kalamazoo.

The members of the Committee are: J. K. Swanson, Minneapolis; W. E. Derwent, Rockford; C. N. Chubb, Lincoln; C. A. Leland, Des Moines; F. A. Lemke, Kalamazoo; W. H. Hodge, Chicago; Mark Pendleton, Sioux City; H. C. Orton, Dubuque; S. C. Dows, Cedar Rapids; E. F. Bulmahn, Centerville; J. H. Turner, Chicago; Joe Carmichael, Des Moines; C. A. Nash, Davenport.

## WHAT OUR READERS THINK

PITTSBURGH EQUITABLE METER COMPANY

Pittsburgh, Pa.

April 13, 1929

To the Editor:

The cartoon accompanying the article by W. A. Hudson, on page 136 of the March issue of the A. G. A. Monthly, brings to mind a case where a man did almost exactly the same thing as the "manufacturer" is shown doing. This gentleman, however, actually made money from his transactions, though it must be admitted that his product was used in a different manner than he expected.

The man referred to was Lord Timothy Dexter, of Newburyport, Massachusetts. In the last days of the 18th century he shipped a cargo of warming pans to the East Indies on the advice of some friends. His ship's captain, being of a more practical mind, took the lids from the pans and punched holes in them. When he reached his destination, he sold the pans for ladles and the covers for strainers for use on the sugar plantations.

Another of Lord Timothy's exploits consisted in sending a cargo of English Bibles to the Dutch East Indies. Between the natives and the Dutchmen, the Bibles were useless as reading matter, but they met a ready welcome as wrapping paper and the profits mounted up in the big house under the gold eagle on top of Newburyport's highest hill.

Sir Timothy's exploits make interesting reading, and while the two mentioned above seem to give the lie to Mr. Hudson, they must be considered as the exceptions that prove the rule.

Lyman M. Vauder Pyl,
Chief Chemist.

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NATURAL GAS DEPARTMENT

Pittsburgh, Pa.

To the Editor:

The March Monthly, as usual, is most interesting. The story on page 137 about the modern farm caught my eye because it has a certain human interest—a sort of vitamin and ultra violet ray flavor.

But, while spending some hours on the train, I have more time than usual for philosophizing and have tried to draw several morals including: We often are not familiar with what our neighbors are doing, more information about our neighbors' accomplishments might save us money spent in research; trade associations can be very useful "animals"; publicity (and lots of it) pays; there are many more good stories just around the corner if we can find them.

To be specific, this is the first gas-farm article which I have read. But, 16 years ago, when I went with the Western United Gas and Electric Company, one Tom Dougherty had already developed a very large farm gas load and I helped him for a year and a half to increase it. We had many miles of high pressure manufactured gas lines passing along country roads, so our opportunities were many.

Farmers were using gas for cooking, heating water in their homes and barns, lighting homes, farm yards, and even barns (in one cow barn there were gas mantle lamps mounted so that they could be swung up when not in use), gas engines for pumping water, driving milking machines, sawing wood, cutting feed and filling silos, space heaters, incubators, brooders, etc. The use of gas for incubators was not "recently discovered," as the article in the Monthly would infer.

What makes these facts more interesting to me is that the Public Service Company of Northern Illinois (from which the article came) and the Western United are not only neighbors and now close relatives by marriage, but they have been competing with gas and electricity in some of the very communities where some of the above mentioned installations were made.

More power to you in getting such diversified and interesting stories! I hope that they result in a fuller exchange of ideas and experiences.

E. J. Stephany.

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## Japanese Gas Man Sees Good-Will Era

AN assurance of the firm and lasting character of the good relations existing between Japan and the United States was expressed in New York by Seischichi Iwasaki, Japanese employers' delegate to the twelfth session of the International Labor Conference at Geneva in May. Mr. Iwasaki, who was recently accompanied by his son, S. Iwasaki, Jr., a Harvard graduate, who is acting as his secretary, visited the grave of Theodore Roosevelt at Oyster Bay, along with a party of Japanese business men of the city.

Later he told of his high respect for the memory of Roosevelt, of how both countries need each other's friendship and of how Japan is bending her efforts to such a harmony.

Mr. Iwasaki, president of the Tokio Gas Company, Ltd., is a graduate of Yale of the class of 1889 as well as an alumnus of Cornell. He said his visit here, aside from its personal aspect, was to promote international good-will.

He was a welcome visitor at A. G. A. Headquarters.

# The Gas Engineering Course at Johns Hopkins

**Report of Committee and Resolutions Adopted by the Executive Board, American Gas Association, April 10, 1929**

YOUR Committee, appointed by the President at the last meeting of the Executive Board to investigate the Gas Engineering Course conducted by the Johns Hopkins University, visited the University on March 13th last and had a satisfactory conference with President Frank J. Goodnow, Dean John B. Whitehead, of the Hopkins School of Engineering, and Professor Wilbert J. Huff, in charge of the Gas Engineering Department, followed by an inspection of the facilities devoted to the course in gas engineering. The Committee was very favorably impressed by the extent and thoroughness of this work and recognized its far-reaching value to the gas industry.

*A view of the campus of Johns Hopkins University, home of the gas course*

This Gas Engineering Course was established about five years ago at the request of the Southern Gas Association which, through its members and contributing companies, provided a modest fund to insure the carrying on of the work for a pioneer period of five years. This period is nearly over, necessitating measures to provide for the future.

It is the first Gas Engineering Course established in any American university conducted by a separate department devoted exclusively to gas engineering. It includes, in addition to a thorough grounding in engineering fundamentals, a comprehensive study of those principles met in everyday gas operating practice. It includes, also, technical research into many problems of gas manufacture, distribution, and utilization.

For this short period of trial, with rather insufficient means, the equipment installed to carry on the work was naturally limited, but such apparatus as it was possible to secure has been used with efficiency, and the educational results produced by the staff are to be commended.

The course also presents an opportunity for research that heretofore has not been available to the industry generally and is comparable to the work carried on in the private laboratories of some of the larger companies. The teaching staff and the graduate students at the Johns Hopkins University carry on such research as a part of the activities of the course and thus stimulate the interest in the scientific and technical problems of the industry. Even more important than the research work, however, is the training of men who have elected in advance to make the gas industry a field for their careers. There is urgent need for technically trained men, and the demand for students graduated last year —the first class—was greatly in excess of the supply.

The Committee was so greatly impressed with the sincerity, efficiency, and value of the work accomplished at Johns Hopkins that it firmly believes it should be continued by the University and should be financially supported by the gas industry. It would be unthinkable to permit this important work to lapse, but it cannot continue without funds from sources in addition to those that contributed during the initial period. As is inevitably the case, tuition fees alone are not sufficient.

The teaching staff is ably fitted to carry on the work outlined in the curriculum. The

men attending the course impressed the Committee as being interested in their studies and earnest in their endeavors to obtain an education that will be useful to them in meeting the present-day problems of the gas engineer.

The Committee believes this course should have the full sanction and hearty support of the Board and the officers of the American Gas Association, and further, that the facilities and advantages of the course should be called to the attention of all members of the Association so that they may have a clear understanding of the work being done, and the Committee believes they should be urged to support the course as offering opportunity for education of young men who will later be available for important work in the industry. It is only through such support and by adopting a sound plan of financing for the future that continuance and success of the course can be assured.

The authorities at the Johns Hopkins University have estimated that, after allowing for tuition fees and without making any provision for increasing the activities or expanding the work, it would be necessary to make expenditures of not less than $15,000 a year. To place the Gas Engineering Department on the same footing as other major engineering departments of the University would require $25,000 a year. The guaranteed contribution for the first five-year period was about $8000 a year. The actual expenditures for the last year were double that amount when the overhead expenses borne by the University are included.

In order that the work can be continued in the next scholastic year, the gas industry should contribute at least $15,000 to meet the immediate requirements and take steps to raise this amount to $25,000 a year in the near future. The Committee believes it is necessary to supply funds either through endowments or yearly contributions, or both. It is suggested that in addition to general endowments, it may be considered desirable to provide support by means of specific endowments, such as endowing a memorial chair bearing the name of some distinguished member of the American gas industry, or by specific contributions for mechanical equipment. A number of companies have offered scholarships, recognizing the importance of training of men who have chosen gas engineering as a profession. This indicates an appreciation of the work at Hopkins and also indicates the need of trained men. Gas companies generally should be urged to cooperate in this manner.

In any consideration of the raising of funds for the Department of Gas Engineering, it is important to bear in mind the necessity of arranging for some form of permanent financial support. The immediate need is to raise a guarantee fund, but it is also necessary to give assurance of financial support for an unlimited time. Students are enrolled from year to year with the moral obligation on the part of the University to enable them to complete their four-year course. It is also essential that the permanence of the course be assured in order to secure a satisfactory teaching staff and to provide for the natural expansion of the work. Moreover, the Department of Gas Engineering at Hopkins should not be subjected to the uncertainties of funds being raised from time to time to support it.

It is proposed that definite steps be taken by the Executive Board to bring this whole situation to the attention of the gas industry and allied industries to the end that they may be fully informed of the conditions and importance of making financial contributions.

### Resolution

The Committee presents the following resolution to the Board, with the recommendation that it be adopted as the action of the Board:

WHEREAS, the Committee appointed to investigate the Gas Engineering Department at the Johns Hopkins University has reported its findings, that it is an undertaking of great and far-reaching value to the gas industry and should be continued and supported by gas companies and gas equipment companies and by individuals identified with them; and

WHEREAS, the Committee further reported that the five-year experimental period is

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# 400 Attend Distribution Conference

By SPECIAL CORRESPONDENT

*F. M. Goodwin*

THE necessity for research and the keeping of complete and uniform records in distribution work were two of the main topics discussed at the sixth annual Distribution Conference of the Technical Section, A. G. A., held at Boston, Mass., April 3, 4 and 5. More than 400 engineers attended the conference, this figure being an increase of more than 100 per cent over the attendance at the first meeting held in 1924.

The program consisted of committee reports and papers with ample time allowed for discussion and the exchange of operating experiences. It was emphasized at the meeting that research is important since the industry's investment in underground piping is so large that efficient operation is essential. This efficient operation can be secured best through research and the keeping of adequate records.

F. M. Goodwin, of the Boston Consolidated Gas Co., and Chairman of the Distribution Committee of the Section, presided.

The conference was welcomed to Boston by Dana D. Barnum, President of the Boston Consolidated Gas Co., and a past President of the American Gas Association. Mr. Barnum presented some interesting facts about New England and said that the distribution problem there is a peculiar one, since 80 per cent of the inhabitants live in 27 per cent of the total area. John J. Quinn, President of the New England Gas Association, also welcomed the conference in behalf of the Association.

Much interest was given the report of the Committee on High Pressure Distribution by L. A. Kirch of Chicago, Ill. The following were considered:

1. Economies to be obtained by the use of different types of prime movers and pumping equipment.
2. Economies of repumping gas on transmission lines.
3. Effect on load factor and economies resulting from the use of storage holders.
4. Capital investment in mains.

Relative to problem 1 examples of the operating costs of several companies were presented. These examples showed that a straight line reciprocating compressor is used largely if not exclusively as pumping equipment for high pressure transmission. Either steam, gas, or electric drives are satisfactory as prime movers. A larger fixed investment and maintenance cost is necessary with a gas engine drive than with a motor drive. Each compressor installation is in the final analysis dependent largely upon the cost or value of the various kinds of energy.

A. G. Ford, of Aurora, Ill., discussed the effect on load factor and economies resulting from the use of storage holders, in a paper based on the needs of his own company. Mr. Ford showed the advantages to his company of high pressure holders in the handling of peak loads.

In connection with this report on high pressure distribution, H. K. Seeley, of Syracuse, N. Y., gave the results of the Syracuse experiments on the effect of high pressures on B.t.u. content.

It was impossible for C. S. Goldsmith, of Brooklyn. N. Y., to present a definite report for the Committee on Distribution Portable Equipment, because sufficient data had not been secured as yet from the questionnaires sent out. M. F. Reeder, of Chicago, Ill., representing the Accounting Section, emphasized the necessity of securing accurate data in cost accounting. Mr. Reeder said that this is the present trend of the industry, and companies are realizing that accurate operating data are of the greatest value.

It is significant that pipe corrosion, coverings, and joints received a great deal of attention. Research appropriations have

been granted covering these subjects, and it was apparent at the conference that the industry is waiting for the results of this important work.

J. K. Crowell, Mt. Vernon, N. Y., presented the Report of the Committee on Pipe Coatings and Corrosion. He outlined the program and proposed work of this committee. The next speaker was Dr. K. H. Logan, of the U. S. Bureau of Standards, who presented a paper on "Status of Research Work on Soil Corrosion and Protective Coatings." Dr. Logan emphasized the necessity of securing available and worthwhile data on protective coatings.

Dr. Scott Ewing, the research associate of the Committee, discussed the purpose and scope of the work on pipe protection.

C. H. Waring, of Kansas City, Mo., presented a particularly interesting paper on "Experience With Pipe Protection." This was a complete and thorough analysis of the subject and brought to the conference a comprehensive analysis of the problems which the natural gas industry faces. Mr. Waring said that the problem is a pertinent one since more than $3,000,000,000 is required annually to replace iron and steel protections because of corrosion. He said that the chemist will solve the problem of corrosion.

The paper of Dozier Finley, Chairman of the Corrosion Committee, Pacific Coast Gas Association, on "Corrosion Protection on Underground Pipe" was read by Mr. Crowell. It was brought out in this paper that thin and inexpensive pipe coating treatments are practically worthless. Mr. Finley emphasized again the seriousness of the pipe corrosion problem and said that in his opinion every company should give it the attention it deserves. He said the problem was serious enough to merit the attention of the A. G. A., the Bureau of Mines, Bureau of Standards, and the American Petroleum Institute, all of whom are working on it at the present time.

In the following discussion it was brought out that important results are expected of research. The keeping of adequate records of pipe laid and coatings used was also stressed. One speaker said that an immediate need was for some method of analyzing soils quickly and testing coatings easily. It was thought that this was hardly possible, since local conditions sometimes arise which make an accurate analysis impossible. Another speaker suggested that the corrosion problem be attacked from the standpoint of metallurgy.

Alexander Forward, managing director of the American Gas Association, then addressed the conference briefly, stressing the importance of the distribution engineer to the industry as a whole.

O. S. Hagerman, of Chicago, Ill., presented the Report of the Pipe Joints Com-

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*Recent meeting of Accident Prevention Committee at Pittsburgh, Pa. Standing—G. J. Gefoert, E. D. Ketcham, W. E. Hughes, C. C. Atwood, E. S. Beaumont, Ross Gray. Seated—E. R. Dobbin, Chairman P. A. Alberty, A. J. Van Brunt, J. W. West, Jr.*

# A Simple Classification of Conversion Equipment

By C. GEORGE SEGELER

**This is Part 2 of a chapter on conversion equipment which apepars in the third printing of the second edition of the American Gas Association Industrial Gas Series books. Part 1 was printed in the April issue of the MONTHLY. Part 3 will be printed in the June issue.**

**—Editor.**

TO clarify the comparison of conversion burners it has been felt advisable to adopt a simple classification to segregate the different types.

**1. Elementary Atmospheric Burners.**

(a) The simplest burners are the drilled pipe burners, which are merely set into the firebox of a coal-fired unit. No attempt is made to control the amount of excess air which enters the furnace. No refractories are used with the burners.

(b) Special shapes of these atmospheric type burners are available. Some of these are single-port burners playing a large volume of flame into the firebox. Others are multi-port. Minor variations in construction include the differences in the method in which the primary air for combustion is mixed with the gas. The gas pressure under which these operate is the domestic service pressure. Very often, baffling of the flue passages is resorted to, in order to increase the scrubbing effect of the hot flue products.

(c) A modification in the above systems includes two variations. The first allows the flame to play down on refractory bed simulating the effect of a coal fire. The second allows the gas flame to play under a refractory bed. The latter has the obvious disadvantage of having the hottest surface underneath and throwing this radiant heat on the floor of the furnace rather than into the water.

These burners are the simplest to use for conversion systems. There are, however, a great many items which require careful thought in dealing with them. The first is the question of excess air. These burners are installed in most cases without running a flue gas analysis of any kind, but they are the type which require a flue gas analysis more than any of the others. As a result, they are frequently installed in such a manner that a great deal of excess air enters the furnace. Under such circumstances, the operating efficiency falls off very rapidly.

The single port burners encounter difficulty from flash back unless they are very carefully handled. Some use a gauze type burner, but this possesses the inherent disadvantage that the gauze will burn out eventually, and then flash back troubles will be encountered.

Refractory type burners should be so designed that refractory breaking down due to long exposure to high temperatures should not fall on the burner ports and close them up.

Some makes of these burners are installed at angles which cause small quantities of unburned gas to escape on shutting off of the main burner. This quantity, while not harmful, may escape into the cellar and cause a disagreeable odor.

Not all of these burners have been provided with adequate pilot-lighting facilities, but improvements are being noted from time to time.

**2. Burners with Secondary Air Control**

(a) Many of the installations which were made yielded low efficiencies because so much excess air was drawn into the firebox. In order to control this a number of systems were devised in which all of the secondary air is admitted through a sheet metal duct. In this type of equipment a control damper rises and falls in accordance with the position of the gas valve, preventing large excesses of air during the low periods.

Investigation of these burners shows that while they are a great improvement over the elementary type, there is still room for some considerable changes.

Consideration should be given to examination of the design of the venturis and methods for control of secondary air in selecting burners in this classification.

Reference might be made in dealing with all atmospheric burners to the A. G. A. Industrial Series handbooks, *Combustion,* in which a study of the design of atmospheric burners has been included.

Venturi burners should have a gentle slope, and should have a throat area approximately 43 per cent of the total port area. The port area used in turn depends upon the gas for which the burner is designed, for approximately 25,000 B.t.u. are allowed per square inch of port area with manufactured gas burners, and 15,000 for natural, in order to get the best results.

Careful study of the air mixers and burner port areas for a good many conversion systems shows wide divergence from the above unit figures. This does not mean that such burners do not work satisfactorily, but does indicate that their range of flexibility is limited by these features of design.

**3. Burners placed in close proximity to the Heating Surface**

(a) While this might seem a special form of the elementary burners mentioned in the first group, the classification is intended to cover those burners which are placed very close to the heating surface and which are provided with refractory shapes or metal plates so designed that an annular space is formed in which the burner is set. All the hot gases are thus confined to a relatively small area and very excellent efficiencies result. It does not seem to make very much difference whether these shapes are made of metal or refractory and both are used.

Mention has been made several times of refractories. In this connection it might be well to consider some important developments which are taking place in connection with gas flames.

It is becoming more generally recognized that gas flames, even when non-luminous, possess some degree of radiant energy, depending upon the flame temperature and the amount of excess oxygen which is present in the flue gas mixture. Even without refractories, therefore, there will be a great proportion of direct heat transferred from the gas flame when this is at or near perfect combustion conditions near the heating surface. The presence of a refractory in the fire serves one essential purpose, and that is to increase the proportion of heat transmitted by radiant energy. This need not have any effect upon the over-all efficiency of a unit. If the heat of a gas flame is removed by the processes of conduction, convection, and radiation, concentrated in a radiant, and re-radiated directly to the heating surface in a firebox, then there is just that much less heat available in the flue gases as they enter the indirect heating surfaces. Apparently, the efficiency of equipment with and without radiants is not very different. It must not be forgotten that the radiant becomes hot by the selfsame processes of conduction, convection and radiation which would otherwise be functioning to transfer the heat directly to the heating surface of the furnace or boiler without the intervention of the radiants. At this time but little is known about the details of this subject except that experiments show that when the flame temperature is raised, the flue temperature frequently falls rather than rises as might be expected from a casual study of the question.

**4. Burners with Air Blowers**

(a) Some of the conversion equipment manufacturers have gone so far as to include air blowers with their devices. The air blower is said to be of advantage in making the combustion more nearly perfect. Moreover, it is expected to develop higher burning velocities and thus improve the heat transfer by making the hot gases scrub the heating surface more rapidly. Naturally, the burners themselves could be placed in accord with any of the several systems which have been outlined above. There might be some disadvantage in the use of an electric blower because of current failure. Fortunately the electric utilities are so developed that current interruption of any long duration is a rare occurrence indeed. Moreover,

the burners are equipped with safety controls which shut off gas in event of electric current failure.

It must not be inferred from these classifications that the lines of demarcation are absolute, because any one of these burners may incorporate some of the features of other types.

In order to obtain as good results as a gas-designed boiler would yield, it would be necessary to include in a conversion system all of the control and safety devices regularly supplied with a gas boiler. Then the only difference in cost of the two systems would be that arising from the saving in the cost of the actual cast iron boiler itself. This saving would not be as large as might be expected, because in assembling the conversion systems there is a relatively higher labor charge than in erecting a boiler designed for gas.

There are additional features to be considered in connection with conversion equipment. Coal boilers and furnaces are designed with rather wide flue passages. Then, the coal equipment is connected directly to a flue. As a result, conversion equipment, if installed without suitable precaution, will be subject to the direct stack draft. Under coal operation this stack draft was reduced by the rather high firebed resistance. When the gas burner is installed, this resistance no longer exists, and as a result the draft is much too high. Baffling is therefore resorted to, and this is an important feature of many satisfactory conversions. However, the baffling may interfere with the proper combustion of the gas.

Sometimes, on the other hand, it is not possible to baffle coal equipment satisfactorily because of structural difficulties. The gas designed boiler has a length of heat travel properly proportioned to the volume and temperature of the flue gases so as to extract the maximum amount of heat. It is very difficult to imitate this in the conversion of coal equipment. Further study of this problem is being done under the auspices of the A. G. A. and other laboratories.

This problem is intimately tied up with another, namely, the question of the flue gas velocity through the equipment. The efficiency of heating surface is measured by the rate at which heat can be transferred from hot flue gases to the surface. The coefficient of this heat transfer varies over wide ranges, depending upon the condition of the surface, the nature of the material, and the kind of materials which are being heated and cooled. The known values in gas equipment vary all the way from 0.5 to 10 B.t.u. per square foot of heating surface area per degree difference in temperature between one side and the other per hour. However, for any one class of heat transfer as, for example, from hot flue gases to water in a steam boiler, the coefficient can be confined to very narrow limits (about 0.5 to 2 B.t.u. per hour per square foot per degree difference).

*Gas conversion installation*

Just by way of comparison, it might be noted that this coefficient, based on the rate of transfer of heat through the metal wall of the boiler alone, is as much as 450 B.t.u. per hour per square foot per degree difference per inch of thickness. The reason that the overall coefficient of transfer is so much lower is because of the presence of the so-called dead gas film adhering close to the metal wall. The resistance of this film is the principal block to heat transfer from hot gases to the metal wall. It is the most important feature of heat transfer. The resistance is probably 20 to 30 times as great

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# Mr. Cortelyou Completes 20 Years' Service as President of Consolidated

*G. B. Cortelyou*

TWENTY years ago March 25, George Bruce Cortelyou was elected President of the Consolidated Gas Company of New York. Just three weeks before Mr. Cortelyou had laid down his portfolio as Secretary of the Treasury in President Theodore Roosevelt's cabinet when William Howard Taft succeeded Colonel Roosevelt to the Presidency. Mr. Cortelyou had previously held two other cabinet positions—Secretary of the Department of Commerce and Labor, and that of Postmaster-General.

When Mr. Cortelyou was elected president of the Consolidated Gas Company, he filled a vacancy that had existed since 1904 when Harrison E. Gawtry resigned the presidency to become chairman of the board of trustees. In the interim Walter R. Addicks, now senior vice-president of the company, had been Acting President of the Consolidated Gas Company.

A remarkable growth in the financial and business structure of the Consolidated Gas Company is shown under Mr. Cortelyou's administration. In the annual report of 1909 which gave the operations for the previous year, the company's investment in land, plant and equipment was $243,811,950, as compared with $989,186,766 in 1928, the latter showing an increase of $745,304,816, or 306 per cent. The total assets on December 31 last were $1,080,740,446, as compared with $284,747,991 on December 31, 1908, an increase of $795,992,455, or 280 per cent. The company's gross revenues grew from $39,324,967 in 1908 to $212,594,530 in 1928, an increase of $173,269,563, or 441 per cent.

When Mr. Cortelyou became president in 1909, the total number of employees of the Consolidated Gas Company and its affiliated gas and electric companies was 10,448, as compared with 45,821 employees in 1928, an increase of 339 per cent. There are now 3,382,205 gas and electric meters installed for service, as compared with 857,170 in 1908, or an increase of 295 per cent in the local territory of the gas and electric companies in the company's family.

Many changes in the development of the gas industry have come during Mr. Cortelyou's incumbency of the office of president. While the use of gas for lighting has shown a material shrinkage in this city and in Westchester and Queens Counties, Mr. Cortelyou has seen that hole filled by the extraordinary increase in the use of gas for industrial purposes and for house heating and water heating. More than 90 per cent of the hotels and restaurants now depend on gas for cooking, and nearly 100 per cent of the

*Mr. Cortelyou at his desk on March 25*

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# The Monthly Tabloid—Personal and Otherwise

*E. C. Uhlig*

THE prominent part chemists have in the gas industry was emphasized on April 3 at a testimonial dinner to Edward C. Uhlig, chief chemist of The Brooklyn Union Gas Co., Brooklyn, N. Y. The affair, held at the Elks' Club, was tendered Mr. Uhlig in recognition of his 25 years of continuous service with the company.

Clifford E. Paige, vice-president of The Brooklyn Union Gas Company, in an eulogistic address, stressed the importance of chemistry in the gas business and spoke of the valuable services rendered by Mr. Uhlig in his quarter of a century of service, not alone to the company but the gas industry as a whole.

Other prominent speakers, all complimenting the guest of honor on his record of accomplishments and service, were Major Alexander Forward, managing director of the American Gas Association, F. C. Weber, assistant vice-president of the Brooklyn Union Gas Company, and W. Cullen Morris, vice-president and chief engineer of the Consolidated Gas Co. of New York.

Mr. Uhlig entered the gas business on April 4, 1904. He is a member of many scientific societies and has served as chairman of several important committees of the American Gas Association.

John I. Blanchfield, statistician of the company, acted as toastmaster.

During the evening Mr. Uhlig was presented with a fitted travelling bag. Mr. Uhlig responded with a short address in which he traced his career with the company.

**Stuart Bratesman,** who has been in charge of display advertising for the Providence Gas Co., Providence, R. I., for the past three and one-half years, has resigned from that company to take charge of similar activities for the Queens Borough Gas & Electric Co., Far Rockaway, N. Y.

*Mr. Bratesman*

Mr. Bratesman studied art at the Rhode Island School of Design in Providence. He has been a member of the Window Display Committee of the American Gas Association for the past two years.

*R. Z. Zimmermann*

**R. Z. Zimmermann** has been elected vice-president of The United Gas Improvement Company in charge of purchasing. He succeeds J. A. Pearson, who resigned after 40 years of service.

The new official is a half-brother of John E. Zimmermann, president of the U. G. I. He is 35 years old and has had wide experience in the public utility industry, having been connected with Day & Zimmermann, Inc., since November, 1916.

R. Z. Zimmermann was born in Buenos Aires, Argentine Republic, in 1894. He was educated at Institute Libre de la Segunda Enseñanza of that city, and at the University of Pennsylvania, from which he was graduated in mechanical engineering in 1916. That year he joined Day & Zimmermann, Inc., and with that organization has gained broad experience in the design, construction, and management of utility properties in Pennsylvania, Ohio, South Dakota, and Nebraska.

In November, 1926, he was appointed assistant to the vice-president in charge of public utility management of Day & Zimmermann, Inc., and has been associated with The United Gas Improvement Company since 1927 when a controlling interest in that firm was acquired by the U. G. I.

**John V. Peck,** manager of the Garland Hotel Appliance Division of the Detroit-Michigan Stove Co., has resigned his position and will take up his permanent residence at Los Angeles, Calif., about June 1st.

Mr. Peck joined The Michigan Stove Company in 1897. When The Michigan Stove Co. and the Detroit Stove Works consolidated under the name of Detroit-Michigan Stove Co., Mr. Peck was made manager of the Garland Hotel Appliance Division, which he has held to this time.

His successor will be Richard R. Hindley, who has also been with the Garland Division for several years as assistant sales manager.

**Robert H. Griffin,** formerly of E. H. Rollins and Sons, was recently elected vice-president of the Southern Cities Utilities Co., The Islands Gas and Electric Co., and The Whetstone Engineering Co.

**The Armstrong Cork and Insulation Co.,** which has been located at Pittsburgh, Pa., has announced the removal of its offices to Lancaster, Pa.

**Reed A. Cameron,** of Columbus, Ohio, has assumed charge of the sales activities of the Pittsburgh group of the Columbia System. Mr. Cameron was identified with the sales organization of The Peoples Gas Light & Coke Co., Chicago, Ill., and was later connected with the Lovekin Water Heating Co., Philadelphia, Pa., as district sales manager, and subsequently filled a similar position with the L. J. Mueller Furnace Co., Milwaukee, Wis. He recently went to Columbus as assistant general sales manager on the properties included in the Columbia's territory.

E. C. Weston, formerly business manager at Toledo, Ohio, has replaced Mr. Cameron in Columbus. Mr. Weston received his degree of B. S. Chemistry at Wesleyan University, Middletown, Conn., and has been actively identified with the gas industry ever since, serving in various capacities with different utilities.

**R. J. S. Pigott,** who for three years was mechanical engineer with Stevens & Wood, Inc., and later consulting engineer with The Public Service Production Co., and Smoot Engineering Corporation, has returned to the Stevens & Wood organization as consulting mechanical engineer.

For several years Mr. Pigott was chairman of the A. S. M. E. Main Research Committee.

**The Louisiana-Mississippi** Committee on Public Utility Information has announced the removal of its offices to 826 Hibernia Bank building, New Orleans, La. Horace M. Blain is director of the committee.

**Stewart F. Magor,** formerly assistant general manager, United Fuel Gas Co., was recently elected vice-president of the United Fuel Gas Co., Virginia Gasoline & Oil Co., Warfield Natural Gas Co., and the Huntingdon Development and Gas Co.

**K. L. Simmons,** for the past 16 years general manager of the El Paso Gas Co., El Paso, Texas, has tendered his resignation.

**Clarence W. Goris,** formerly accounting and statistical assistant to S. E. Mulholland, vice-president of the Public Service Co. of Northern Indiana, is now on the accounting staff of the Middle-West Utilities Investment Co., Chicago, Ill.

**T. N. Jones,** who has been general manager of the Norfolk Division of the Virginia Power and Light Co., has been made vice-president of the company with headquarters at Richmond, Va.

**C. C. Curtis,** vice-president and manager of the Fall River Gas Works Co., Fall River, Mass., has been elected to the board of directors of the Fall River National Bank.

## H. A. Gager Is Dead

*H. A. Gager*

HARRY A. GAGER, president of Salem, Ohio, City Council, civic leader in Salem and Columbiana County for many years, and prominent in the natural gas business in Ohio and Pennsylvania, died at the Charity Hospital, Cleveland, April first, following an operation.

He was born January 7, 1883, in Salem, Ohio; educated in the public schools; served as reporter and city editor on the **Salem News.** In 1907 he joined the Natural Gas Company of West Virginia and was actively identified with business of its Ohio operations until the company became a part of the Ohio Fuel Corporation in 1925. Then he became assistant general superintendent. In 1926, when the Ohio Fuel Corporation merged with the Columbia Gas & Electric Corp., he became connected with the management of the Pittsburgh Group of the Columbia System as special agent.

He served as president of the Salem Chamber of Commerce in 1917-1918, took an active part in war work, was president of the Salem Kiwanis Club, a leader of the Democratic party in Salem, and in Columbiana County, and widely known in Ohio Democratic circles. In 1924 he represented the 18th Ohio District as delegate to the famous Democratic National Convention in New York.

He was a member of Salem City Council in 1908 to 1910, served on local board of education from 1912 to 1914 and was serving a second year of his term as president of the Salem City Council at the time of his death.

His interests allied him with many other organizations. He was a member of the Salem Country Club, and of all the Masonic bodies in Salem, as well as the Shrine in Cleveland. He was a member of the Ohio Oil and Gas Men's Association, having been on its Advisory Committee. Was secretary of the Pennsylvania Natural Gas Men's Association, and a member of the American Gas Association, serving on several of its committees, and associate editor of **Hail Columbia**—Columbia State Employees' Magazine.

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FORMER President and Mrs. Macbeth have been on an extended vacation trip to the Orient, visiting China, Japan and Hawaii, and sailed for home from Yokohoma on April 12th.

# Affiliated Association Activities

## Oklahoma Utilities Association

*T. R. Weymouth*

THOMAS. R. WEYMOUTH of the Oklahoma Natural Gas Corp., Tulsa, was elected to head the Oklahoma Utilities Association at its annual meeting in Oklahoma City, March 12 to 14. Other officers elected were first vice-president, T. H. Steffins of the Sand Springs Railway Company; second vice-president, S. I. McElhoes of the Southwestern Light & Power Co.; treasurer, W. R. Emerson of the Oklahoma Gas & Electric Co.; chairman of Gas Division, E. C. Joullian of the Oklahoma Gas Utilities Co. The directors of the Gas Division are Thos. R. Weymouth, Logan Cary, and H. L. Montgomery.

## Michigan Gas Association

FOR the fifth consecutive year the annual meeting of the Michigan Gas Association will be held jointly with that of the Michigan Electric Light Association, at the Grand Hotel, Mackinac Island, Michigan. The dates this year are July 1, 2, and 3. Holding these conventions at the famous Michigan summer resort is rapidly becoming an institution and is an event looked forward to by Michigan gas men during the entire year. No more delightful time or place could be chosen. In fact, so popular are these conventions becoming that it is no longer possible to accommodate all that desire reservations at the Grand Hotel and other hotels on the Island have to be pressed into service. This is largely because of the increasing practice of members to bring their wives and families. In fact, in many respects this convention now assumes the aspect of a huge house party, so congenial is the atmosphere and so unusual and attractive are the diversions offered.

While the social side of the conventions has been developed to perhaps an unusual extent, the business side has by no means been neglected and the excellence of the programs attests eloquently to this fact. This year, as previously, sessions will be held in the forenoons only. On Monday, July 1st, will be the joint meeting of the two Associations under the auspices of the Michigan Committee on Public Utility Information, A. C. Marshall of The Detroit Edison Company, Chairman. The program for this meeting will include the annual report of Director Arthur W. Stace, an address by Col. Oscar H. Fogg, President of the American Gas Association, and other speakers of national or state prominence.

On Tuesday and Wednesday, July 2 and 3, the Gas Association meeting will be given over to technical discussions. On Tuesday will come the report of the Research Committee on the two years' work done by Assistant Professor E. S. Pettyjohn, of the University of Michigan, on the Evaluation of Coals for Water Gas Making. There will also be a paper covering the installation and operation of the first Gas Dehydration system in the United States, at the plant of the Grand Rapids Gas Light Company.

For the last meeting, President Frank A. Newton has planned a general discussion of topics particularly along commercial lines, such as house heating, refrigeration, water heating. Most of these will be in the nature of committee reports and discussions.

## Pennsylvania Gas Association

*W. A. Norris*

AT the annual convention of the Pennsylvania Gas Association, held at Benjamin Franklin Hotel, Philadelphia, Pa., on April 10-11, many valuable papers and addresses were presented.

Officers who will conduct the Association's affairs for the coming year were elected as follows: President, Warren A. Norris, Lebanon Valley Gas Co., Lebanon; 1st vice-president, W. F. Swayze, Parkesburg Gas Company, Parkesburg; 2nd vice-president, Frank P. Duggan, Penn Central Light & Power Co., Lewistown; 3rd vice-president, L. S. Williams, The Harrisburg Gas Co., Harrisburg; treasurer, Wm. G. Sterrett, Philadelphia Suburban Counties Gas & Elec. Co., Philadelphia; secretary, Geo. L. Cullen, The Harrisburg Gas Co., Harrisburg; council, M. A. Boylan, Scranton Spring Brook Water Service Co., Scranton; John A. Weiser, Peoples Light Co., Pittston; Smyser Bair, Pennsylvania Gas & Electric Co., York; and L. W. Heath, Pennsylvania Power & Light Co., Williamsport.

## Missouri Association of Public Utilities

THE annual meeting of the Missouri Association of Public Utilities will be held at the Hotel Bothwell, Sedalia, Mo., May 16, 17, 18.

H. D. McGrath, of the Kansas City Power and Light Co., will present a paper on gas house heating.

Entertainment features will be an automobile trip, dinner and dance at the Sedalia Country Club, golf contest at the Sedalia Country Club, annual banquet and carnival at Liberty Park, and bridge parties for the ladies.

### The Empire State Gas and Electric Association

*H. C. Davidson*

THE annual meeting of the Accounting Section of the Empire State Gas and Electric Association will be held at the Hotel Van Curler, Schenectady, N. Y., on May 9 and 10.

The program will include addresses by the Hon. Wm. A. Prendergast, Chairman of the Public Service Commission of the State of New York, Ordway Tead, of Harper & Brothers, New York City, and C. S. Ruffner, President of The Empire State Gas and Electric Association. There will also be papers upon the subjects of tabulating machine methods of customers' accounting, centralized billing of customers' accounts, the humanizing of collection policies, and fixed capital records. Among the important committee activities of the section will be included the report of the Joint Committee on Merchandising Policies.

On the afternoon of May 9th an inspection trip has been arranged through the Schenectady Works of the General Electric Company. There will also be a golf tournament for members and guests at the Mohawk Golf Club.

H. C. Davidson, secretary of the Consolidated Gas Company of New York, as Chairman of the Section, will preside at the meetings.

THE program for the annual meeting of the Women's Section of the Empire State Gas and Electric Association, to be held on May 2 and 3 in the Savings Bank Building, Ithaca, N. Y., promises to be an extremely interesting one.

The Thursday morning session will contain the following reports: Prof. D. S. Kimball, dean Engineering College, will discuss the subject of "Educational Institutions in Industry;" Hon. Merwin K. Hart, member New York State Industrial Survey Commission, will consider the subject of "Industrial Conditions in New York State;" Ethel Conklin will report on "The Year's Work of the Women's Section;" and Isabell Davie will discuss "Women's Work in Other States."

The afternoon of Thursday, May 2, will be devoted to trips through the College of Home Economics and the Agricultural College.

A banquet will be given in the Bank Building restaurant at 7:00 P. M., and the speakers will be Mrs. Travis H. Whitney and Vladimir Karapetoff.

At the Friday morning session President Charles S. Ruffner will address the meeting on "The Meaning of Utility Mergers." Miss Martha Van Rensselaer, director College of Home Economics, will talk on "Home Economics as a Factor in Everyday Living." The election of officers will follow.

### Pacific Coast Gas Association

THE Pacific Coast Gas Association will hold its annual Pacific Northwest Conference in Victoria, B. C., on June 7 and 8, with headquarters at the Empress Hotel.

Papers and reports will occupy the entire time with the exception of the afternoon of June 8, which is left open for sightseeing and golf. A luncheon will be served on the 7th, which will be addressed by a prominent speaker. A dinner-dance is being planned for the evening.

The program for this conference will be largely concerned with load building and sales promotion. The committee on domestic sales, headed by A. P. Stryker, of the Pacific Gas & Electric Co., is planning to make its final report at this meeting. The committee on gas refrigeration, headed by Joe Fremont, of the British Columbia Electric Power and Gas Co., will also report.

It is expected that C. H. Dickey, president of the Pacific Coast Gas Association, will preside at all meetings. F. H. Hewlings, of the British Columbia Electric Power and Gas Co., Victoria, is in charge of all arrangements.

### Wisconsin Utilities Ass'n

OFFICERS of the Accounting Section of the Wisconsin Utilities Association have been busy arranging for several numbers to be presented at the Accounting Section convention to be held at Sheboygan on June 20 and 21.

Speakers from outside the membership include G. C. Mathews, of the Wisconsin Railroad Commission, whose subject is to be announced later; Kurwin R. Boyes, secretary of the American Gas Association, who will discuss employee education; and Howard L. Smith, certified public accountant of McMurry, Smith & Co. of Madison, who will discuss differences in accounting and financing of privately owned and municipally owned utilities.

Chairman Louis T. Smith will present the chairman's address.

Other numbers which have already been arranged for are: Depreciation replacements, by A. J. Bohl, T. M. E. R. & L. Co.; scientific rate

(Continued on page 318)

**Natural Gas Department**

S. W. MEALS, Chairman — H. C. MORRIS, Vice-Chairman

E. J. STEPHANY, Secretary

# Chronology of Natural Gas Conventions, 1906-1928

1906
Organization Meetings
Kansas City—February 20 & 27

Present, 1st meeting—6.
Present, 2nd meeting—13.

1906
1st Annual Meeting
Kansas City, Mo.—June 12 & 13

Attendance—42.
Papers read—7. Committee reports—1.
President—Kerr M. Mitchell.
Vice-president—M. M. Sweetman.
Secretary—J. H. Dunkel.

1907
2nd Annual Meeting
Joplin, Missouri—May 21-22-23

Attendance—100. No exhibits.
Papers read—12. Committee reports—4.
President—Kerr M. Mitchell.
Vice-president—M. M. Sweetman.
Secretary—J. H. Dunkel.

A resolution condemning flueless appliances was passed.

1908
3rd Annual Meeting
Kansas City, Mo.—May 19-20-21

Attendance—no report. Exhibitors—no report.
Papers—6. Committee reports—3.
President—J. C. McDowell.
Vice-president—W. H. McKenzie.
Secretary—J. H. Dunkel.

1909
4th Annual Meeting
Columbus, Ohio—May 18-19-20

Attendance—200. Exhibitors—no report.
Papers—5. Committee reports—3.
President—J. C. McDowell.
Vice-president—W. H. McKenzie.
Secretary—T. C. Jones.

Mr. Jones was appointed to serve the unexpired term of the former Secretary who resigned on account of ill health.

1910
5th Annual Meeting
Oklahoma City, Okla.—May 17-18-19

Attendance—185. Exhibitors—no report.
Papers—6. Committee reports—6.
President—W. H. McKenzie.
Vice-president—J. M. Gerard.
Secretary—T. C. Jones.

1911
Pittsburgh, Pa.—May 16-17-18

Attendance—300. Exhibits—50.
Papers—8. Committee reports—9.
President—J. M. Gerard.
Vice-president—A. B. Macbeth.

At this meeting the first wrinkles were submitted—now an established part of the natural gas meetings. The idea of steel rigs for drilling was also introduced.

1912
7th Annual Meeting
Kansas City, Mo.—May 21-22-23

Attendance—250. Exhibits—no report.
Papers—11. Committee Reports—8.
President—A. B. Macbeth.
Vice-president—M. B. Daly.

1913
8th Annual Meeting
Cleveland, Ohio—May 20-21-22

Attendance—335. Exhibits.
Papers—11. Committee reports—7.
President—M. B. Daly.
Vice-president—E. L. Brundrett.

The most discussed subject was the comparative values of steel versus cast iron pipe. Commercial side of gas industry was much discussed.

1914
9th Annual Meeting
St. Louis, Mo.—May 19-20-21-22

Attendance—250. Exhibits.
Papers—9. Committee reports—10.
President—E. L. Brundrett.
Vice-president—Jas. T. Lynn.

Much discussion on measurement of large volume of gas and on losses of gas in transportation.

1915
10th Annual Meeting
Cincinnati, Ohio—May 18-19-20

Attendance—450. Exhibits.
Papers—8. Committee reports—11.
President—Jas. T. Lynn.
Vice-president—Glenn T. Braden.

This marked the largest and most successful exhibit, and also one of the best meetings.

1916
11th Annual Meeting
Pittsburgh, Pa.—May 16-17-18

Attendance 700. Exhibits.
Papers—8. Committee reports—14.
President—W. Y. Cartwright.
Vice-president—Jos. F. Guffey.

1917
12th Annual Meeting
Buffalo, N. Y.—May 15-16-17

Attendance—650. Exhibits.
Papers—8. Committee reports—12.
President—Jos. F. Guffen.
Vice-president—Glenn T. Braden.

Notable feature was address of A. C. Bedford on mobilization of industry for war, and the formation of the war service committee which remained in service for the duration of the war.

1918
13th Annual Meeting
Pittsburgh, Pa.—May 22 and 23

Attendance—400. No exhibit.
Papers—8. Committee reports—8.
President—Jos. F. Guffey.
Vice-president—K. C. Krick.

D. O. Holbrook was elected secretary and treasurer at this meeting, succeeding T. C. Jones. The joint meeting of the oil producers of the Appalachian region was an interesting event.

1919
14th Annual Meeting
Cleveland, Ohio—May 19-20-21-22

Attendance—1000. Exhibits—125.
Papers—8. Committee reports—11.
President—K. C. Krick.
Vice-president—B. C. Oliphant.

The joint meeting of the newly-organized American Petroleum Institute, and the number of prominent men on the program, helped to make one of the most successful meetings of the association.

1920
15th Annual Meeting
Buffalo, N. Y.—May 17-18-19-20

Attendance—850. Exhibitors —.
Papers—7. Committee reports—10.
President—B. C. Oliphant.
Vice-president—H. J. Hoover.

1921
16th Annual Meeting
Cincinnati, Ohio—May 16-17-18-19

Attendance—1000. Exhibitors —.
Papers—7. Committee reports—14.
President—H. J. Hoover.
Vice-presidents—L. B. Denning, O. K. Shannon, H. A. Quay.

The excellence of the program both at the daily sessions and the banquet, the large number of visitors to the exhibits, and the daily concerts all helped to make this one of the best of the many good conventions.

1922
17th Annual Meeting
Kansas City, Mo.—May 15-16-17-18

Attendance—650. Exhibitors —.
Papers—11. Committee reports—14.
President—L. B. Denning.
Vice-presidents—E. P. Whitcomb, H. L. Montgomery, N. C. McGowen.

1923
18th Annual Meeting
Louisville, Ky.—April 16-17-18-19

Attendance—700. Exhibitors —.
Papers—6. Committee reports—12.
President—J. D. Creveling.
Vice-president—J. B. Corrin.

At this meeting the Wednesday afternoon session was given over to an address by Hon. Frank B. Willis, Senator from Ohio.

1924
19th Annual Meeting
Cleveland, Ohio—May 19-20-21-22

Attendance—1350. Exhibitors —.
Papers—6. Committee reports—15.
President—H. A. Wallace.
Vice-president—J. B. Corrin.

First reports on studies of leakage on high-pressure transmission lines given.

1925
20th Annual Meeting
Atlantic City, N. J.—May 18-19-20-21

Attendance—800. Exhibits.
Papers read—7. Committee reports—11.
President—J. B. Corrin.
Vice-president—A. W. Leonard.

At this meeting Wm. B. Way resigned as secretary, to be succeeded, later in the year, by Guy F. Batchelor.

1926
21st Annual Meeting
Tulsa, Okla.—May 17-18-19-20

Attendance—650. Exhibits.
Papers—7. Committee reports—14.
President—A. W. Leonard.
Vice-president—R. W. Gallagher.

Two sessions were devoted to discussion of previously suggested subjects which proved interesting and helpful.

**1927**
22nd Annual Meeting
Cincinnati, Ohio—May 9-10-11-12
Attendance—750. Exhibits.
Papers—12. Committee reports—12.
President—R. W. Gallagher.
Vice-president—N. C. McGowen.

This meeting marked the end of the Natural Gas Association, as the merger with the A. G. A. was voted at that time.

**1928**
1st Meeting Natural Gas Dept.
Dallas, Texas—May 7-8-9-10
Attendance—1675. Exhibits.
Papers and addresses—9. Committee reports—4.
Chairman—N. C. McGowen.
Vice-chairman—S. W. Meals.

## Distribution Conference

(Continued from page 292)

mittee and told of the research work which is to be conducted on this subject. A man is to be engaged to do the work, part of which is to be carried out at various college laboratories.

E. V. Kesinger, of Bartlesville, Okla., presented a particularly valuable paper on "Field Application of Oxy-Acetylene Welding." Mr. Kesinger presented his subject in five parts. These were placement of personnel and equipment, costs, procedure control, application to other parts of line than joints, and leakage. The subject considered field transmission lines in the natural gas industry. Among the conclusions which Mr. Kesinger presented are the following:—

1. An oxy-acetylene welded joint is a practical type of joint for long distance, high pressure, gas transmission lines. The main advantages of the welded joint are: lowest leakage rate; least maintenance; ease of protecting joint from corrosion; joint not affected by commodity being transported; joint remains tight and confidence in welded line increases with age. Some of the disadvantages are: the relative high cost of the joint itself; the extra supervision the welding must receive; the effect of all-welded construction on the design of the pipeline; all of which reflect as an increased cost for the completed line.

2. Joints welded under field conditions vary in strength, even when welded by competent welders under close supervision. Many factors contribute to this condition, such as varying amount of penetration which is possibly the largest individual factor. However, the indications are that 75 per cent of the field welded joints will develop 90 per cent of the pipe strength, with the remaining 25 per cent developing very close to 100 per cent of the pipe metal strength.

Another paper on welding was presented by David L. Brown, Pontiac, Mich. The title was "Field Application of Electric Welding." Mr. Brown gave a practical reason for adopting the arc method of joining steel gas mains with the general view of the actual methods used. He stated that the cost of an arc welded line should compare favorably with the cost of an oxy-acetylene line. He said that a little greater speed is obtained and a lower rate of pay to welders is possible, although this may not be true in all sections of the country. A thorough and lively discussion on the subject of welding followed.

The Report of the Committee on Meters was presented by W. H. Bettle of Newark, N. J. The various subjects submitted to the committee for investigation included types of meters for large industrial installations, cast iron meters, comparison of the life of semi-chrome tanned leather and bar tanned leather, apparatus used for testing and adjusting large capacity meters.

Henry J. Sterk, of Chicago, Ill., followed Mr. Bettle and discussed the proving of large capacity meters. E. S. Umstead, of Providence, R. I., explained a special combination of meters chained together whereby accurate and easily checked meter readings of high consumption are obtained. These latter two talks were illustrated by the use of charts.

Joseph Lucena, of Philadelphia, Pa., presented the Report of the Subcommittee on Study of Distribution Design for House Heating Having Particular Reference to the Conversion of Low Pressure System to Intermediate Pressure System. In discussing the complete conversion from low to intermediate pressure at Lincoln, Nebraska, Mr. Lucena said:

"There is no question as to the economies of the system adopted for Lincoln, Nebraska. There is no question of the improved customer service by the delivery of gas at uniform pressure. If gum forming and other harmful im-

purities are removed from the gas supplied, so that regulator maintenance will be practically nil, then beyond a doubt the gas customers of that city are receiving an ideal service. The financial condition of the operating company is also improved.

"The whole problem is one of improving the load factor of the distribution system of flexibility of supply rather than by flattening the peaks. The 100 per cent conversion to higher pressure seems to answer this admirably in some situations. In many other cases, especially in the older, congested cities, one would hesitate to adopt 100 per cent conversion to higher pressure without relaying, probably at a prohibitive cost, many of the existing small cast iron mains. It is believed, however, that it is entirely practical, and probably economical to carry out such a policy over a long period of years, in some situations. It should be possible to prove, by calculation, for any situation, that by starting with outlying extensions built for higher pressure or the conversion of existing outlying sections to higher pressure, whether or not the scheme would pay. It is assumed that the higher pressure is available, having been previously provided to supply the low pressure system through a district governor which has become inadequate. This would involve laying out a definite policy, contemplating the gradual extension of the system with the needed replacement of such mains as were deemed unsafe for higher pressure, for any reason, usually to be determined from records of past performance. It is conceivable that such a program, followed to its logical conclusion, would gradually work back from the outskirts toward the plant so that eventually everything would be supplied by higher pressure except a relatively small area adjacent to the plant. The Committee is not aware of any situation which has actually tried to calculate such a plan and the idea is advanced purely as a possibility. In any case, it is not possible to make a general recommendation. Each situation must be considered individually."

M. I. Mix, of Chicago, Ill., presented the Report of the Committee on Unaccounted For Gas.

Paul Ryan, statistician, American Gas Association, discussed Mr. Mix's report and emphasized the magnitude and importance of the subject. He said that there is a lack of any satisfactory measure by which unaccounted for gas may be compared. The highest unaccounted for gas reported by a list of 140 companies was given as 20 per cent and the lowest two per cent. Mr. Ryan said that he felt there is a need for a formulation of a more useful basis with which to compare unaccounted for gas.

An Open Forum was held the last day of the Conference. These Open Forums have become an institution at distribution conferences, and the one held this year was a particularly valuable one for all present. The first subject discussed was the report of the Committee on Cast Iron Pipe Standards by Walton Forstall, of Philadelphia, Pa.

In a discsusion of Mr. Forstall's report it was shown that nearly every company has its own standards for plain and cast iron pipe fittings. A committee was appointed to study the subject in order that a standard might be established, and also to consider the testing of these fittings.

The Open Forum brought out a variety of interesting discussion. The question of welding lines under pressure showed considerable difference of opinion. In connection with split pipe seams it was suggested that pipe be laid with the seam at the top to provide ready accessibility in case of repair.

The effect of dehydration upon unaccounted for gas was brought up. American practice has not been complete enough to determine this but English practice has shown no appreciable effect. British practice also shows an average saving of 1.1 cents per M of gas dehydrated in the case of meter repairs and replacements alone.

Stolen gas received considerable discussion with various methods of lessening it discussed. The periodical inspection of all dead services was recommended.

The possibilities in the injection of meter oil mixed with graphite by gravity or pressure into the yarn of a bell and spigot joint was described and illustrated. In tests made where an 1/8" hole was drilled in the bell for oil introduction and the lead wool drilled until leaks appeared it was found that within 3-4 days 5 lbs. pressure could be carried without leakage.

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**F. R. Wogan** was recently elected director of The Brooklyn Union Gas Company, Brooklyn, N. Y.

Accounting Section
F. H. PATTERSON, Chairman H. W. HARTMAN, Secretary J. L. CONOVER, Vice-Chairman

# Training Supervising Personnel

By WILLIAM L. DIEHL

**This is a progress report of a subcommittee of the Accounting Section and was presented at the recent Chicago Accounting Conference. Mr. Diehl is chairman of the committee. The final report will be available at the October A. G. A. convention.**

*The problem of adequately training those who supervise is an important one*

THE scope of the report of this committee includes a consideration of the following items:

1. The supervisor and his field.
2. Leadership demands made on the supervisor.
3. Functioning in the regular course of duties.
4. Disposing of working facilities and material.
5. Meeting emergencies.
6. Carelessness and mistakes.
7. The cost factor.
8. Promotion of satisfactory service.

While great importance has been stressed by the committee for the need of properly training the supervising personnel, occasional reference is made to contact personnel and customers' relations. This is not due to any intention on the part of the committee to duplicate the work of other committees, but because of the subjects being so closely related, it is impossible to do justice to one without making some reference to the other.

### The Supervisor and His Field

Much has been accomplished in the past with respect to training the so-called "direct contact personnel," particularly those assigned to front office work who have been given the lion's share of our attention, comprising most of the prescribed fields of education and departmental training. While this is as it should be, we believe that in the enthusiasm of the moment we have not always given our supervisory positions attention in keeping with their importance. Yet, it cannot be denied that any measure of success achieved from our efforts properly to train the personnel will be discounted unless we vigorously exert ourselves in training the supervisor.

Exclusive of executives, public contact personnel readily divides itself into two groups, viz: The office group having contact with the customer on the company's premises, and the operating group having contact with the public on the district and customer's premises. However, no one acting in a supervising capacity should be considered too far removed from public contact to require only a knowledge of the job's mechanics. Supervisors of the various department groups should be chosen, wherever possible, from those matured in the company service who have acquired not only a mastery of the job's mechanics but have shown also a disposition to fit themselves for its responsibilities.

### Leadership Demands Made on the Supervisor

If we were to ask the meaning of leadership, the answer would come quickly—"to lead or to guide." Without stretching one's imagination to any great length, there would readily occur "to supervise." Here

Mr. Diehl is assistant secretary of the Bronx Gas and Electric Co., New York, N. Y.

we have demand for some highly important attributes in certain individuals upon whom, as we have already stated, depends the success or failure of all our efforts in the interest of training the personnel for better customers' relations. There can be no question of the desirability of choosing supervisors from the rank and file of the company, for there is nothing that reacts more favorably upon an organization than a promotion from within the ranks. The supervisors' responsibilities should include not only a knowledge of the job but a skill in its performance that will invite the respect of subordinates. They should have the ability to meet responsibilities without fuss or bluster and be alive to the importance of training their people to appreciate the spirit of satisfaction that comes only from a job well done. Personal appearance is important. Therefore, they should encourage neatness, as well as be mindful of setting the example.

**Functioning in the Regular Course of Duties**

Necessity for criticism or reproof occurs naturally in any business. It is the result of circumstances that cannot be controlled. However, it is not the fact of criticism that creates the trouble but the way in which it is administered. Proper correction or reproof never hurt any man. But a man known to be gifted with a temper that prompts on the slightest provocation the damning of those committed to his charge is a stumbling block in the path of achievement and has no place in a position of power over others if he has no control over himself. In the matter of supervising working relations, we have elements that reflect themselves in the cost as well as in the character of service we render. Therefore, proper supervision is bound to reflect its benefits throughout our service. If the supervisor's responsibility is in the field, he should exert himself constantly to speed up service, being mindful of duplication of work orders, men arriving on the job without proper material and tools, men leaving the customer's premises at least as they found it, watching for dissatisfaction in the ranks which may be aggravated by petty jealousy or imaginary favoritisms (usually the result of misunderstandings). This applies also to the supervisor of the office group who has the additional responsibilities presented by departments ranging from the front office to the addressograph and collection departments and in some companies to the indexing, high bill inspection, and special service divisions. Your supervisors should have the confidence of executives, as well as the support of every department head in the organization, for in this lies the secret of successful and efficient service—a service in keeping with the spirit of the gas industry.

**Disposal of Working Facilities and Material**

Lack of trained supervision is like navigating a ship without a rudder. Here is a problem calling forth all of the skill demanded by a service that is complex and exacting. To do it justice, as it relates only to the distribution department, would be a task sufficient in itself. For example—let us enumerate just a few of its possibilities requiring trained supervision:

Organizing departments to get the best out of each working day.

Coordinating department groups so as to eliminate interdepartmental telephoning and unnecessary messenger service, all of which results in delays, idleness, confusion, and stagnated service.

Watch the phone service, zone the district, and re-zone to meet requirements of growth.

Systematize the routing of orders so that they will be ready on the arrival of the operating force.

Insist upon legible orders to eliminate errors.

Make periodic inspections of tool kits, replacing those that have become worn and confirming that one-half of their original contents have not been diverted elsewhere.

Time the orders and study the result for speeding up services.

Study the order system to incorporate, if possible, related items on a single ticket. This will simplify the system, effect economy, and return to the heavens some of the glories of the rainbow.

Watch your stores so that there is ample material on hand at all times, and no delay in its withdrawal, keeping in mind, however, that over-stocking is costly.

Watch the transportation and related equip-

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**Publicity and Advertising Section**
E. FRANK GARDINER, Chairman JAMES M. BENNETT, Vice-Chairman

# Beautify the Plant—It Pays

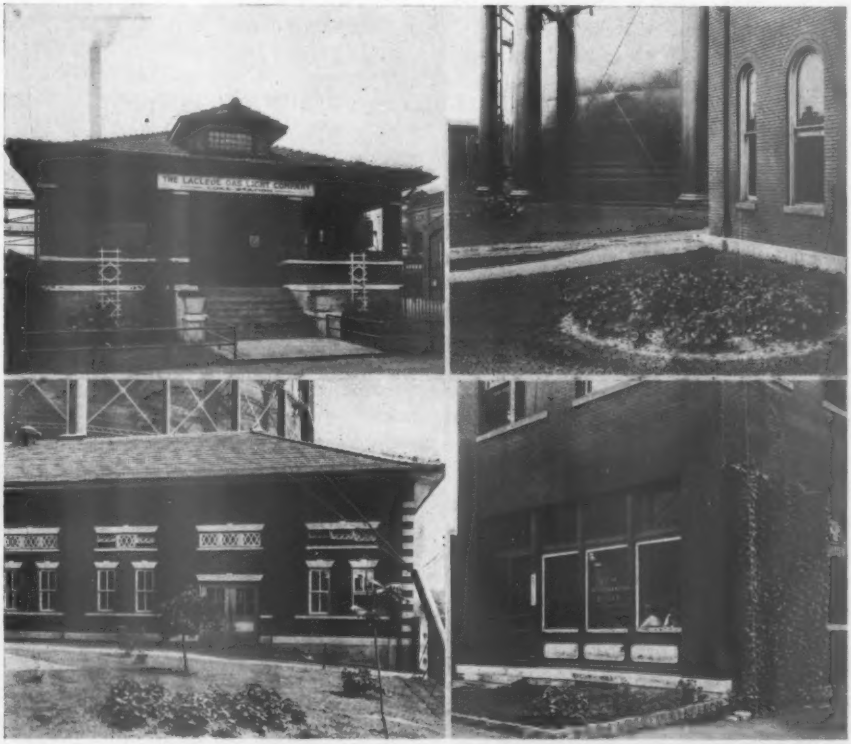
By R. D. LEWIS

THE old assumption that gas plants, or "gas woiks," as they are commonly called, represents the worst in industrial districts is being reputed right now in St. Louis.

The Laclede Gas Light Company has conceived the idea that, disregarding the fact that the plants are not located in the most up and coming neighborhoods, there was no reason why they shouldn't appear as neat and clean as possible under the circumstances. Of course the very nature of the industry lends certain difficulties in keeping up an appearance commensurate with other manufacturing plants. But certain progress can be made in keeping a gas plant clean, as has been proved by the St. Louis company.

Outlying holder stations offer the best opportunity. Some of these are located in close proximity to good residential sections and the Laclede, appreciative of this fact, has taken steps to add to the attractiveness of these stations. The most effective bit of work in this connection has been the sodding of the yards surrounding the holders, which

Mr. Lewis is director of public relations, The Laclede Gas Light Co., St. Louis, Mo.



*The plants and stations of The Laclede Gas Light Co. look smart and neat after the "face-lifting" process*

are kept well trimmed in the summer, and the planting of large canna lily beds. It is a little odd to see these massive steel structures surrounded by velvety green carpets of grass dotted here and there with the bright red and yellow canna blossoms, but it is decidedly attractive.

It might seem ridiculous to talk about washing the windows at the gas plants, but that also is being done in St. Louis. Each superintendent takes a personal pride in his property and buildings and yards are as spick and span as possible, considering the conditions. If it is impossible to remove refuse, scrap, or some obsolete machinery, it is piled in neat, orderly piles. Painting of all fences, pipes, and woodwork is given careful attention, all of which is a mere matter of housekeeping and helps wonderfully to create a respect for the property. Plant appearance has become so much a part of the daily routine that flower beds have appeared in the yards around the offices, and one assistant superintendent is experimenting with certain hardy types of plants in order to determine which will thrive under such circumstances.

Three years ago officials of the Laclede decided that plant appearance was a good asset. A plan was put into effect which called for periodical inspections and the awarding of plaques and cash prizes. The various properties of the company throughout the city were divided into four groups, the plants comprising one group, holder stations another, and district shops, garages, and storerooms the other two. Plaques are awarded every six months and cash prizes once a year.

## Johns Hopkins Course

(Continued from page 290)

about to elapse and that further financial support is necessary to assure the continuance and success of this important work;

NOW, THEREFORE, BE IT RESOLVED, that the American Gas Association, through its Executive Board, fully and heartily endorses the work done in the Department of Gas Engineering by the Johns Hopkins University, recognizes the great importance of providing technically trained men who have chosen the gas industry as a field for their careers, approves the methods adopted in educational and technical research work, and will encourage the use of the facilities of the Gas Engineering Department, whenever feasible, in the technical research work undertaken by the Association, and

RESOLVED FURTHER, that the Association staff be directed to bring before the company members, individual members, the gas industry generally, and equipment companies identified with the gas industry, the facts contained in the report of the Committee, the action of the Executive Board and all further pertinent information, appealing for financial support either in the form of yearly contributions or permanent endowments to assure the continuance and permanence of this successful venture, so intimately connected with the future of the gas industry.

Signed by C. M. Cohn, F. C. Freeman, Arthur Hewitt, and J. B. Klumpp, Chairman.

## Mr. Cortelyou

(Continued from page 296)

apartments depend on the commodity for the same purpose.

Mr. Cortelyou recently commented on the wide strides that the gas industry as a whole had made during his connection with the industry. Gas refrigeration was one of the developments he referred to—that one having immediately enjoyed popular favor. There have been vast improvements in the appearance and efficiency of gas ranges and other household gas appliances.

In looking back over his twenty years as the head of one of the country's largest business enterprises, Mr. Cortelyou has seen the enormous development of both gas and electric manufacturing and generating plants in this city. Under his administration there has been a studied development and improvement in the various services rendered to the public.

Mr. Cortelyou has given much time and effort to the development of the gas industry through the American Gas Association. He was the first President of the Association, and served two years.

**Manufacturers Section**

H. LEIGH WHITELAW, Chairman F. G. CURFMAN, Vice-Chairman
C. W. BERGHORN, Secretary

# Plan for Record A. G. A. Exhibit

MANUFACTURERS will be particularly interested in the announcement that the American Gas Association's eleventh annual convention will be held in the new municipal auditorium, Atlantic City, N. J., October 14 to 18. Advance indications point to the largest exhibit of gas appliances and equipment ever held by the industry. The prospectus of the exhibition is now in the mails.

The industry has in the new auditorium all available facilities for a large and impressive exhibition. There will be no crowding, and while every available square foot of space will be used the aisles will be amply large.

It is impossible to give in one page a detailed description of the splendid features of this new auditorium. However, more than 75,000 sq.ft. of net space will be used. Of course, all of the facilities necessary for an exhibition will be available.

Manufacturer companies are being urged to make reservations for a sufficient amount of space to allow for their exhibits. This is practically the first time in the history of A. G. A. conventions that the Association, through the Exhibition Committee, can offer ample space to all companies, and it is felt that all manufacturers will purchase more booth space than they have in the past few years.

The largest amount of space ever used for an A. G. A. exhibition was in 1926, when more than 56,000 sq.ft. net were used on the Million Dollar Pier. The growth in the number of exhibitors at A. G. A. conventions is shown in the following figures:

In 1919 there were 110 exhibitors; in 1920, 110; in 1921, 112; in 1922, 135; in 1923, 165; in 1924, 182; in 1925, 208; in 1926, 225; in 1927, 236; and in 1928, 278.

All manufacturer company members of the American Gas Association are urged to make their space reservations early to avoid disappointment and to take advantage of the situation which permits them to reserve all the space they may require.

Members of the Exhibition Committee are: Chairman, H. Leigh Whitelaw, K. C. Farnsworth, Stanley Little, Fred A. Miller, Harry P. Roth, and C. W. Berghorn, director of exhibits.

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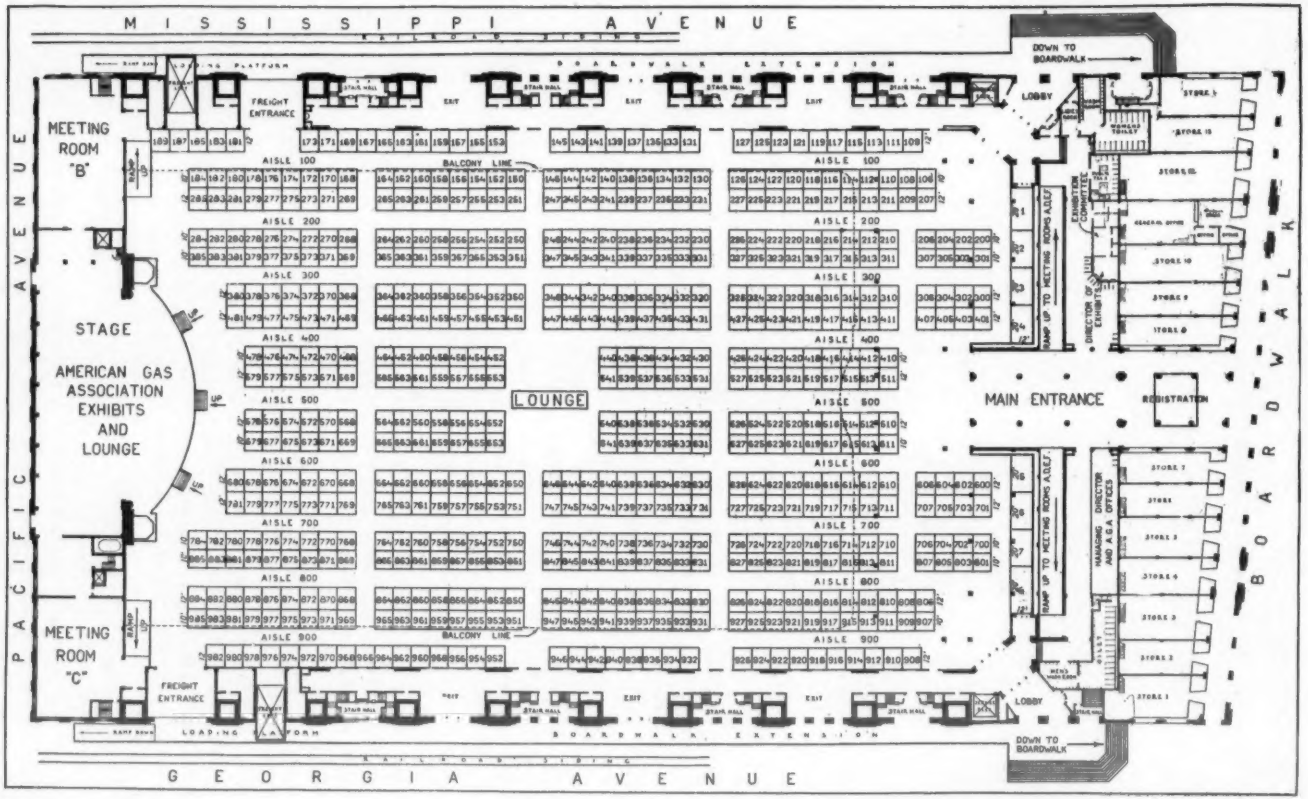
## Does Advertising Influence Women?

A recent issue of the **Inland Printer** calls attention to a survey made by the Women's Advertising Club of Los Angeles. The purpose of this survey, according to the **Inland Printer**, was to determine as far as possible the attention given by women to advertising generally. The following summary was reported as made up from answers given on one thousand questionnaires:

| Do you read— | Yes (Per Cent) | No |
|---|---|---|
| Newspaper advertisements | 83 | 6 |
| Circular letters | 33 | 40 |
| Announcement cards | 64 | 17 |
| Booklets and pamphlets | 32 | 35 |
| Magazine advertisements | 72 | 10 |
| Program advertisements | 65 | 14 |
| Streetcar advertisements | 75 | 11 |
| Billboards | 54 | 23 |

| Which of these influence you most? | (Per Cent) |
|---|---|
| Newspapers | 36 |
| Circular letters | 1 |
| Announcement cards | 4 |
| Booklets and pamphlets | 1.7 |
| Magazine advertisements | 22.7 |
| Program advertisements | 3 |
| Streetcar advertisements | 4.2 |
| Billboards | 4.4 |
| Did not answer—could not decide | 2.3 |

The same issue of the **Inland Printer** states that women provide about 85 per cent of the department store income and 70 per cent of the movie-house business.




*Layout of booths for exhibition at annual A. G. A. convention in Atlantic City, N. J., Oct. 14-15*

**Industrial Gas Section**

J. P. LEINROTH, Chairman — C. W. BERGHORN, Secretary — C. C. KRAUSSE, Vice-Chairman

# Two Industrial Courses Available

TWO industrial gas courses are to be given this year, one at the University of Illinois, Urbana, Ill., from June 17 to 29, and the other at Massachusetts Institute of Technology, Cambridge, Mass., from June 17 to 22.

### Illinois Course

The course at Illinois is the Fourth Short Course in gas engineering. It will be held under the direction of Dr. T. E. Layng of the University staff.

The course this year is to be different in many respects from those of preceding years. Industrial, hotel and restaurant, and house-heating subjects will be handled as usual, but the rudimentary work on combustion, chemistry, and physics is to be spread out over a greater number of days than before, giving the students more of an opportunity to digest this most important part of the work.

The 1929 course is believed to be an unusual opportunity for gas companies to send their new men entering new business departments, to develop older men who have already had some sales experience, and to exchange ideas on industrial and house-heating engineering. The use of the time will be along lines that will give the student the greatest amount of training enabling him to solve problems met with in the sale of gas for wholesale purposes.

The short course is sponsored by the Illinois Gas Association and is under the direction of the following committee: J. D. Preble, Public Service Co. of N. Ill., chairman; W. B. Swearingen, Central Illinois Light Co.; A. D. Frydendall, The Peoples Gas Light and Coke Company; J. R. Roberts, Rockford Gas Light and Coke Company; and R. D. Hayes, Illinois Power and Light Corporation.

A large enrollment is expected due to increased activities of gas companies throughout the Middle West in securing industrial and house-heating business. Registration at an early date is advised. Apply to any of the members of the committee, or to George Schwaner, 205 Illinois Mine Workers' Building, Springfield, Illinois, or Dr. T. E. Layng, Chemistry Building, University of Illinois. The tuition fee will be $20. Living expenses will be borne by the students attending the course and will be in proportion to the type of accommodation desired. Reduced rates may be obtained at the Lincoln-Urbana Hotel. Rooms in private homes at low rates will also be available.

A final examination will be held on the last day of the course and those successfully finishing will be presented with a certificate. The course is open to all and there are no entrance requirements.

### M. I. T. Course

The following subjects are among those which will be taken up in lectures at the M. I. T. Course:—Furnace Design and Construction, Combustion, Insulation and Refractories, Burner Application, and Report Writing. With the exception of the lectures on burner application, which are to be delivered by W. H. Hepburn, of the Surface Combustion Company, all other subjects will be covered by regular M. I. T. instructors.

The fee for this course is $50. Rooms are available in the M. I. T. dormitories at $5 a week. Students will be given a complete set of notes covering all lectures.

Upon registering, the student agrees upon completion of the course to furnish the committee in charge with a thesis relative to the course. To the student submitting the best thesis, in the judgment of the committee, a prize of $20 will be awarded. For the second best thesis a prize of $10 will be given.

Full information relative to the course will be mailed to all gas companies within a very short time.

The comimttee urges all gas company executives, sales managers, as well as industrial engineers, to give this year's course careful consideration, for the committee in charge have arranged for subjects which will be of great value to the experienced industrial engineer as well as the cadet.

The continuance of the course depends upon this year's attendance. If the course is not well attended this year, no further effort will be made to maintain an industrial course at Massachusetts Institute of Technology.

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**T. H. Tutwiler,** president of the Memphis Power and Light Company, Memphis, Tenn., has recently been named treasurer of the Southwestern College of the Mississippi Valley.

## Large Gas Plant Will Serve Glasgow and Surroundings

FOLLOWING the example of American and German companies, it is planned to erect a large manufactured gas plant 12 miles from Glasgow, which will serve Glasgow and several neighboring Scotch communities.

## New Business Records

(Continued from page 265)

derived to off-set the expense of carrying on the major load building activities. It is from house heating that the most rapid load building and intensive development of the domestic load can be secured in new business operations.

The total number of central house heating installations, furnaces, and conversion burners which were sold during the year was 2830. This was an increase over the preceding year of 454. The types of equipment included in the total number of installations sold were: 560 gas-designed boilers and furnaces, 2131 gas conversion burners, and 139 gas-oil conversion burners.

For the replacement of coal stoves, baseburners, and similar heating apparatus, 2801 Triple Effects and gas Heatrolas were sold.

This is the greatest number that has ever been sold during any year of operation of this company. When the selling of house heating apparatus was first started, the company promoted on a large scale the gas-oil burner installation and quite a number of them were sold. Due to the increased gas supply and the better balance of industrial and domestic loads and the factor of the very high sales expense of this equipment due to much selling resistance, the active promotion of the gas-oil burner has been discontinued by this company.

## Accounting Conference

(Continued from page 282)

analysis. It was felt by all those present that this was a very valuable paper, and that the final report would merit very close attention.

"Statistical Development" was the subject presented by Paul Ryan, statistician of the American Gas Association. Mr. Ryan reviewed some of the more significant figures of the industry for the past few years, emphasizing the striking progress effected in the sales of gas for house heating and industrial uses. At the same time he pointed out that the domestic load, which still constituted the backbone of the industry, was not participating in this growth. He reviewed a number of the economic factors and changes in the living habits of the American public which contributed to this. In discussing the question of domestic sales he considered at some length the question of rates under which gas is sold for domestic purposes, and concluded that on the whole the progress toward the adoption of more scientific rate structures had not been nearly as rapid as desirable if the domestic load was to be retained and augmented.

In summarizing his discussion Mr. Ryan stated "if the management of our gas utilities is to adapt successfully the policies and affairs of such companies to changing economic conditions, there are at least two things which the management must have to an increasing extent, and which must come from the accountants and statisticians, namely: More complete and more detailed classifications and segregations of sales and more of what might be embraced under the general head of functional cost accounting."

In concluding his discussion Mr. Ryan stated that if management were equipped with the information it should have from its accountants and statisticians, if it has full and detailed information on the trends of various classes of sales, and an accurate knowledge of costs, it would be then in a position to formulate rate and sales policies fully competent to cope with the changing economic factors which confront the industry today.

In the open forum which followed there was much informal discussion of various problems now up for solution. Particular attention was paid to the dissemination of information to all employees of the gas company.

H. M. Brundage, vice-president of the Consolidated Gas Co. of New York, and one of the leading figures in the Accounting Section, closed the meeting in his usual splendid manner.

**Commercial Section**

G. M. KARSHNER, Chairman — G. E. WHITWELL, Vice-Chairman

J. W. WEST, Jr., Secretary

# N. Y. Sales Conference Will Be Held May 23-25 at Montauk Point

A SPLENDID program has been arranged for the annual New York Regional Gas Sales Conference to be held at Montauk Point Manor, May 23, 24, 25, according to J. P. Hanlan, Newark, N. J., chairman of the conference. Practically every subject of interest to commercial men will be discussed. It is worthy of particular mention to say that the speakers will all be exceptionally well-equipped to handle the subjects assigned to them.

The conference will open on Thursday, May 23, at 8:00 P.M. The Friday morning session will start at 9:30, and Friday afternoon will be left free. The final session will start on Saturday morning at 9:30. In conjunction with the program a most interesting array of sports events has been arranged by the committee in charge.

The tentative program is as follows:

**May 23—8:00 P.M.**

Opening Remarks—J. P. Hanlan, chairman.

Address of Welcome—E. L. Phillips, Long Island Lighting Co., New York, N. Y.

Economics of Selling Gas and Gas Appliances—Prof. Philip Cabot, Harvard University, Boston, Mass.

Discussion of Important Sales Policies—Merchandising Accounting—H. C. Davidson, Consolidated Gas Co. of New York.

Possibilities of Increasing Gas Sales by Developing Dealer Cooperation—J. H. Van Aernam, New York Power and Light Corp., Albany, N. Y.

Fundamentals of Domestic Salesmen's Compensation—F. L. Hallock, Bronx Gas and Electric Co., New York, N. Y.

General Discussion.

**May 24—9:30 A.M.**

Merchandising—By a prominent authority on the subject.

General Discussion.

How to Hold Your Domestic Cooking Business—W. H. Tappan, Tappan Stove Co., Mansfields, Ohio.

Discussion by—Oliver Washer, The Public Service Electric & Gas Co., Summit, N. J.

General Discussion

Selling Gas Refrigeration—R. L. Hallock, The Brooklyn Union Gas Co., Brooklyn, N. Y.

Load Aspects of Refrigeration—E. J. Devlin, The Brooklyn Union Gas Co., Brooklyn, N. Y.

General Discussion.

**May 24—8:00 P.M.**

A Message from the A. G. A.—Alexander Forward, managing director, American Gas Association.

The Mass Market for Water Heater Sales—E. R. Acker, Central Hudson Gas & Electric Corp., Poughkeepsie, N. Y.

General Discussion.

The Importance of Market Analysis in the Sale of Water Heaters—Joseph J. Genther, Cleveland Heater Co., Cleveland, Ohio.

The Market for Gas Sales in the Home Laundry—F. J. Gruel, Westchester Lighting Co., Mt. Vernon, N. Y.

General Discussion.

**May 25—9:30 A.M.**

What New England Has Done on House Heating—J. J. McKearin, Lowell Gas Light Co., Lowell, Mass.

General Discussion.

Building the Load with Fireplace Heaters—R. F. Cleary, Homestead Heater Co., Newark, N. J.

What the Incinerator Offers the Gas Company—Louis Stotz, Kernit Incinerator Co., Ampere, N. J.

General Discussion.

Future Sales Possibilities in the Metropolitan District—C. E. Paige, The Brooklyn Union Gas Co., Brooklyn, N. Y.

## Gas Is Automatic

(Continued from page 284)

complicated but which is quite simple and entirely reliable.

The gas refrigerator is another example of a completely automatic gas appliance. Ingenious devices are utilized to transform heat energy into refrigeration, the whole cycle acting without human assistance.

The approval requirements of the A. G. A. Testing Laboratory make ample provision for the newer automatic gas appliances.

The industrial uses of gas are rapidly turning to automatically controlled equipment. Automatic gas devices were first used in special heat applications but their uses are rapidly being applied to standard industrial gas appliances. Thermostats, pyrometers, high temperature controls, automatic feeding devices, timing devices, automatic proportional mixers, and ignition devices are among the advanced devices used to apply gas heat scientifically. The use of heat in industry is now a science and gas is being burned with increasing skill.

The industrial gas appliance is becoming more and more a machine built to fit into the production line of modern factories. As the gas appliance continues to be looked upon as a machine, the need for automatic operation increases. Research is being directed along this line to an increasing extent.

Gas is a particularly desirable fuel from the viewpoint of factory managers who produce large numbers of a product by the aid of conveyors and other automatic material handling equipment. Gas furnaces and ovens with moving hearths or moving racks turn out uniformly heat-treated material in a steady, never-ending stream. Whether the product is a pretzel weighing less than an ounce or a steel billet weighing hundreds of pounds, the discharge end of continuous gas furnaces can be depended upon to deliver automatically their allotted number of units each hour.

Because gas is being burned automatically under controlled conditions and the heat thus generated is being applied scientifically, competition is being met more forcibly now than at any other time. Utilization engineers are more optimistic now than at any previous time. Tools are being placed in the hands of gas equipment salesmen to enable them to meet modern home and factory conditions. These automatic gas tools are up-to-date and the salesmen know that there is now hardly a heating operation that cannot be done *better* with gas. With all the automatic appliances now available, the end has not yet been reached. Research is continuing and will keep gas equipment always a few steps ahead of the needs of those who use heat.

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## Statement of the Ownership, Management, Circulation, Etc., Required by the Act of Congress of August 24, 1912

Of the American Gas Association Monthly published monthly at Brattleboro, Vermont, for April 1, 1928.

State of New York, County of New York, ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Howard F. Weeks, who, having been duly sworn according to law, deposes and says that he is the Editor of the American Gas Association Monthly and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown on the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, American Gas Association, Inc., New York, N. Y.; Editor, Howard F. Weeks, New York, N. Y.; Managing Editor, None; Business Managers, None.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) American Gas Association, 420 Lexington Avenue, New York, N. Y.; President, Oscar H. Fogg, 420 Lexington Avenue, New York, N. Y.; Vice-President, B. J. Mullaney, 420 Lexington Avenue, New York, N. Y.; Treasurer, C. E. Paige, 420 Lexington Avenue, New York, N. Y.; Managing Director, Alexander Forward, 420 Lexington Avenue, New York, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

HOWARD F. WEEKS.

Sworn to and subscribed before me this 25th day of March, 1929.

[Seal] LAWRENCE P. BROWN,

Notary Public, New York County Clerk's No. 820.
N. Y. Co. Register's No. 0.7192.
(My commission expires March 30, 1930.)

Technical Section
HARRY E. BATES, Chairman B. V. PFEIFFER, Vice-Chairman
H. W. HARTMAN, Secretary

# Announce Program of Production Conference, May 27-29

ANNOUNCEMENT of the program of the Third Annual Joint Production and Chemical Conference of the Technical Section to be held at the Lord Baltimore Hotel, Baltimore, Md., May 27, 28 and 29, indicates that this will be a most important conference. The program, which has been arranged by representatives of the Carbonization Committee, the Chemical Committee, and the Water Gas Committee, will allow for consideration of subjects of interest to every production engineer in the gas industry.

*Scene in Lord Baltimore Hotel, Baltimore, Md., where the Conference will be held*

The Carbonization Committee has deemed it wise to give considerable attention to the subjects of the preparation, sale, and economic importance of coke.

The Chemical Committee has arranged for subjects of primary interest to chemists, and has prepared a number of symposiums designed to bring out the use of chemistry and the importance of chemists in the operation of gas plants.

The program of the Water Gas Committee is largely based on the subcommittee work on such topics as the utilization of propane and butane, low gravity water gas, mechanical generators, etc. Ample time has been provided for discussion in the program.

A particular feature is a dinner meeting to be held on Tuesday, May 28, at 7:00 P.M. At this time, there will be three meetings of the committees, namely, Chemists' Dinner and Smoker, Dinner Meeting of the Carbonization Committee, and Dinner Meeting of the Water Gas Committee.

Entertainment for the ladies who attend will be provided although definite arrangements have not been made at this time.

While 300 rooms have been reserved at the Lord Baltimore Hotel, it is important that delegates make reservations as early as possible.

Study of the program which is given below shows that careful consideration has been given to subjects of common interest to production men. An informal atmosphere will prevail, and there will be a much fuller discussion of subjects than is possible at the meetings of the annual convention. There has been a decided trend at the conferences sponsored by the American Gas Association for young men to take a more active part in the meetings, and it is felt that this year's Production Conference will bring out even greater interest on the part of the younger engineers.

The first session of the program will be of decided interest to water gas and coal gas operators as well as chemists. Several novel features appear on the program for this session. At the second session important subjects such as boiler water conditioning, Gas Chemists' Handbook, automatic sampling, etc., will be presented. A most interesting feature of this meeting will be a paper, "A Two-Foot and Five-Foot Shelf of Books for the Gas Plant Laboratory."

The program is as follows:

**May 27—10:00 A.M.**

(Water Gas Committee Subjects)

Opening Remarks—John N. Wolfe, chairman, Water Gas Committee.

Welcome to Baltimore.

Report—Summary Report of the Water Gas Committee—I. K. Peck, Midland Utilities Investment Co., Chicago, Ill.

Observations on Gas Production—C. J. Ramsburg, The Koppers Co., Pittsburgh, Pa.

Paper—Mechanical Generators—A. H. Schaaf, The Brooklyn Union Gas Co., Brooklyn, N. Y.

Paper—Developments in Bituminous Coal Operation—E. F. Fischer, United Light & Power Co., Davenport, Iowa.

**May 27—2:00 P.M.**

(Carbonization Committee Subjects)

Paper—The New Racine Plant of Vertical Chamber Ovens—S. B. Sherman, Wisconsin Gas and Electric Co., Racine, Wis.

Report—Producer Committee (a) Effect of Saturation Temperature and Fuel Depth on Producer Gas—Chas. R. Locke, W. P. Ryan, and F. J. Pfluke, (b) Built-in Producer—C. B. Glover, (c) The New U. G. I. Producer—J. S. Haug.

Report—Committee on Revision of Test Code—F. J. Pfluke, Rochester Gas and Electric Corp., Rochester, N. Y.

Report—Low-Temperature Carbonization—C. J. Wright, Combustion Utilities Corp., New York, N. Y.

Report—Committee on Disposal of Plant Wastes—Dr. A. R. Powell, Seaboard By-Product Coke Co., Kearny, N. J.

Report—Committee on Survey of Gas and Coke Making Properties of American Coals—J. S. Haug, United Engineers & Constructors, Inc., Philadelphia, Pa.

**May 28—10:00 A.M.**

(Chemical Committee Subjects)

Paper—Gas Oil Specifications and Evaluations—T. A. Mighill, Pawtucket Gas Co., Pawtucket, R. I.

Symposium—"How I Use Chemical Control." (a) Water Gas Operation—Papers by three water gas superintendents, (b) Coal Gas Operation—Papers by three coal gas plant superintendents, (c) Holding Company Operation—Papers by two holding company technicians.

Paper—Recent Progress in Correlating Coal Ash Fusing Temperature and Clinkering Properties—P. Nichols, U. S. Bureau of Mines, Pittsburgh, Pa.

Paper—The DeGraaf Apparatus for Determining Ash Fusing Temperatures—H. S. Vassar, The Public Service Electric and Gas Co., Newark, N. J.

**May 28—2:00 P.M.**

(Water Gas Committee Subjects)

Reports—Utilization of Propane and Butane—P. E. Eddy, The Peoples Gas Light and Coke Co., Chicago, Ill.

Report—Steam Decomposition in Water Gas Sets—A. E. Lockwood, Stevens and Wood, Inc., New York, N. Y.

Report—Low Gravity Water Gas—E. L. Hall, The United Gas Improvement Co., Philadelphia, Pa.

**May 29—10:00 A.M.**

(Carbonization Committee Subjects)

Symposium on Coke—(a) Coke Statistics in 1928—Paul Ryan, A. G. A. Headquarters, (b) Developing the Coke Market in Battle Creek—J. Frank Jones, sales manager, (c) Coke Preparation, Improvements in Equipment and Methods—James E. Cooper, Utica Gas and Electric Co., Utica, N. Y., (d) Uniform Rate of Coke Deliveries—V. A. Miller, Rochester Gas and Electric Corp., Rochester, N. Y., (e) Report on Coke Specifications—C. A. Lunn and J. E. Urquahart, (f) Suggested Program for Future Coke Committees.

**May 29—2:00 P.M.**

(Chemical Committee Subjects)

Paper—Boiler Water Conditioning for the Gas Plant—S. T. Powell, Baltimore, Md.

Paper—A Two-Foot and Five-Foot Shelf of books for the Gas Plant Laboratory—C. D. Ulmer, The Koppers Co., Pittsburgh, Pa.

Discussion—The Gas Chemists' Handbook—Third Edition—Led by A. F. Kunberger, The United Gas Improvement Co., Philadelphia, Pa.

Report—Thesis Subjects Relating to the Gas Industry—Dr. A. R. Powell, Seaboard By-Product Coke Co., Kearny, N. J.

Symposium—Automatic Sampling in the Gas Plant. (a) Tar, (b) Gas Oil, (c) Proportional Sampling of Blue Gas—Led by C. S. Reeve, The Barrett Co., New York, N. Y.

Paper—Determination of Oxide Volume—J. M. Gonder, Chicago By-Product Coke Co., Chicago, Ill.

Report—Chemical Sub-Committee on Plant Wastes—W. H. Fulweiler, United Engineers and Constructors, Inc., Philadelphia, Pa.

Open Forum—Laboratory Technique—Led by F. W. Sperr, Jr., The Koppers Co., Pittsburgh, Pa.

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## Conversion Equipment

(Continued from page 295)

as the resistance to heat flow through any other part of the transfer from the hot flue gases to the water in a boiler.

The method whereby this value can be

increased is to increase the velocity of the flue gas travel past the surface. This is accomplished by decreasing the amount of excess air, thereby increasing the effectiveness of the draft, by suitable baffling so that the highest velocity gases may be forced to scrub the metal heating surfaces, and by other structural methods which are designed to produce similar effects.

## Training Personnel

(Continued from page 306)

ment with the object of getting service in keeping with the investment.

Elimination of crossed meters.

As a general reminder, the importance of a friendly feeling towards your fellow workmen and the elimination of the so-called "high hat."

The supervisor chosen from the ranks should have acquired during his period of service a background that will permit of his meeting emergencies, whether usual or unusual. He should be encouraged to take the initiative in meeting the responsibilities of the job and not be hampered in developing this trait by others making decisions for him. Errors in judgment will occur which should be called to his attention, but in the final analysis he will, if the right sort, profit by them.

We find the late Theodore Roosevelt had this to say about decisions:

"I believe that in the long run, less damage is done through the mistakes resulting from sticking to decisions once made than would occur from getting into the habit of constantly worrying whether you had decided rightly or wrongly and changing your mind all the time. No man can get ahead on two or more courses. You have to go one way at a time to get any where."

### Carelessness and Mistakes

Here we have a topic blessed with many contributing factors. An exhaustive study of this was made in 1924 by a committee of which J. M. Roberts was chairman, the findings being a matter of record in the A. G. A. Proceedings for that year. Whether or not the solution to the problem can be had only through following the recommendations of this committee, we submit for your judgment: however, here is brief reference to some of the common contributing factors, namely: Ignorance, over-confidence due to familiarity with work, lack of interest, fatigue or kindred reasons, and habitual inability to do things correctly. It seems logical after reviewing these to assume that the answer lies in a constantly alert supervision.

The cost factor follows as a natural result of much that has been previously referred to in the report. Thus, if given the required supervision, many of the cost worries will be eliminated automatically. In relation to this subject there occurs the salary question, which has been given more or less attention in the past. This is purely an economic question, influenced largely by local conditions and must be dealt with on that basis. We submit, however, that much difficulty arises out of trying to get people too cheaply, many of whom soon become replaced by others who remain no longer. This lowers the quality of service but raises the cost.

Quite frequently the remark is made that "this or that compares favorably with Tiffany or Packard quality or service." The inference is that here is represented service achievement by which other service may properly be measured. If this is so, we question the omission of the gas industry from a place in this sun, for where else do you find a better combination of long service, low cost, and convenience? The omission would seem to occur not from any fault of our product or its cost, but from the impression left on our customers by their contact with employees, this contact reflecting in their minds either satisfactory or unsatisfactory service. Therefore, all of our efforts to promote better service with a better public relation depends particularly on the treatment accorded them at the hands of employees.

Education of this contact personnel has been dealt with patiently, capably, and voluminously in the past. So much so, that we have heard much argument at these meetings to the effect that we are bending backwards. Well, if bending will give the public what it wants, let's bend.

Time does not permit referring in detail

to these educational papers but they will be dealt with specifically in the final report, and it is recommended that you get them for supervisors and read them yourself—they will be helpful.

In conclusion, we submit for consideration just a few brief suggestions that the committee believe to be pertinent to the subject assigned for their study. They are as follows:

Generally compaints are due to real grievvances or ignorance of our business methods. If the former, adjust them promptly, profitting by the experience. If the latter, educate employees to appreciate the importance of getting mentally back of the customer's mind, remembering that customers in buying gas are also paying for service with satisfaction. Do not leave letters of complaint to cool their heels on your desk—get busy; answer them promptly. As to the supervisor, let him remember not to put on airs and that he cannot be independent of the kindly give and take spirit of cooperation in his work.

Finally, the real things of importance to invite in employees are intelligence, courtesy, diligence, and loyalty, and after we have created this spirit in the organization, then we will take our place in the sun with the so-called "Tiffany Service."

## Affiliated Associations

(Continued from page 300)

making, by Ewald Haase, Milwaukee Gas Light Co.; taxation, by C. E. Kohlepp, Wisconsin Public Service Corp.; discussion of uniform classification questions will be opened by John Dockendorf, chairman of the Committee on Classification of Accounts; functions of the service department, by Paul Hoffman, Milwaukee Gas Light Co.; and the value of accurate statistics by W. A. Toellner, Chairman of the Committee on Statistics.

Further details of the program for this convention will be announced in the June issue of the **Monthly.**

## Future of Regulation

(Continued from page 268)

public, I am convinced that you have nothing to fear from it.

I would like to point out that no one assumes that we have reached the final goal in utility regulation. There is a wide difference in regulatory laws in the various states and we have no ground for believing that those in Illinois are perfect. Commission regulation, like the industry itself, is comparatively new and is subject to amendment and improvement.

I believe, however, that the powers vested in the State Commerce Commission under present law are sufficient to insure intelligent regulation and it will be the policy of my administration to insist that these laws shall be administered by the commission in a manner which will result in the greatest benefit to the public and the fairest and most intelligent treatment of utilities. There will be no special favors, but at the same time there will be no attempt to play politics with commission rulings. I regard this comimssion as a court which should be made up of men of the highest integrity and, being so constituted, it should function without executive suggestion or interference.

## OUR NEW MEMBERS

Roberts, Jules D., Utah Gas & Coke Co., Salt Lake City, Utah.

Luney, Edmund A., 114 No. Oak Park Ave., Oak Park, Ill.

Henry, Lawrence G., East River Gas Co., 35-20 Broadway, L. I. City, N. Y.

Lepine, Rose C., Miss, The East River Gas Co., 35-20 Broadway, L. I. City, N. Y.

Stevenson, Alexander R., Jr., General Electric Co., Schenectady, N. Y.

Valentine, William E., Rainey-Wood Coke Co., 52 Vanderbilt Ave., New York, N. Y.

Raymond, Jack S., National Tube Co., 208 N. La Salle St., Chicago, Ill.

Neill, James P., Box 302, Greenville, Miss.

Cook, Donald M., Spooner & Merrill, Inc., 111 W. Monroe St., Chicago, Ill.

Sweet, Delos E., The Waterbury Gas Light Co., North St., Watertown, Conn.

Wilson, Joseph B., Coast Counties Gas & Electric Co., Santa Cruz, Calif.

Gurley, Leon R., Carl H. Pforzheimer & Co., 25 Broad St., New York, N. Y.

Wagoner, Bennett, The Flyod-Wells Co., Royersford, Pa.

Brooke, Paul, The Flyod-Wells Co., Royersford, Pa.

Warner, Charles P., Manchester Gas Co., Manchester, N. H.

Beam, Russell C., American Rolling Mill Co., Middletown, Ohio.

Maxwell, George L., Phila. Suburban-Counties Gas & Elec. Co., 9th & Sansom St., Phila. Pa.

Kenney, J. P., Consumers Natural Gas & Power Co., Brady, Texas.

# Associations Affiliated with A. G. A.

**Canadian Gas Association**
Pres.—Frank Elcock, Ottawa Gas Co., Ottawa, Ont.
Sec.-Tr.—G. W. Allen, 7 Astley Avenue, Toronto.
Conv., June 13 & 14, 1929, Ottawa, Ont.

**Colorado Utilities Association**
Pres.—H. S. Robertson, Denver Tramway Corp., Denver, Colo.
Sec.-Tr.—O. A. Weller, Public Service Co. of Colo., Denver, Colo.
Conv., 1929.

**Empire State Gas and Electric Association**
Pres.—Chas. S. Ruffner, Mohawk Power Corp., Albany, N. Y.
Chairman Gas Section—H. E. Merrill, Republic Light & Power Co., Tonawanda, N. Y.
Sec.—C. H. B. Chapin, Grand Central Terminal, New York, N. Y.
Conv., Sept. 19 & 20, 1929, Saranac Inn, N. Y.

**Illinois Gas Association**
Pres.—E. E. Lungren, Western United Gas & Electric Co., Aurora, Ill.
Sec.-Tr.—George Schwaner, 305 Illinois Mine Workers Bldg., Springfield, Ill.
Conv., 1930.

**Indiana Gas Association**
Pres.—T. J. Kelly, Northern Indiana Public Service Co., Fort Wayne, Ind.
Sec.-Tr.—F. W. Budd, Central Indiana Gas Co., Muncie, Ind.
Conv., May 1-2, 1929, Gary, Ind.

**Michigan Gas Association**
Pres.—F. A. Newton, Consumers Power Co., Jackson, Mich.
Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.
Conv., July 1 to 3, 1929, Mackinac Island, Mich.

**Mid-West Gas Association**
Pres.—E. H. Vieregg, Central Power Co., Grand Island, Nebr.
Sec.-Tr.—Roy B. Searing, Sioux City Gas & Electric Co., Sioux City, Iowa.
Conv., Waterloo, Iowa, Apr. 14-16, 1930.

**Missouri Association of Public Utilities**
Pres.—A. E. Reynolds, Springfield Gas & Electric Co., Springfield, Mo.
Sec.-Tr.—F. D. Beardslee, 315 N. 12th St., St. Louis, Mo.
Conv., May 16-17-18, Sedalia, Mo.

**New England Gas Association**
Pres.—J. J. Quinn, Quincy Gas Light Co., Quincy, Mass.
Exec. Sec.—C. D. Williams, 41 Mount Vernon St., Boston, Mass.
Chairman Operative Div.—Isaac T. Haddock, Cambridge Gas Light Co., Cambridge, Mass.
Secretary Operating Div.—H. G. Taylor, Lawrence Gas & Electric Co., Lawrence, Mass.
Gov. Sales Div.—J. H. Sumner, Cambridge Gas Light Co., Cambridge, Mass.
Pres. Industrial Div.—L. B. Crossman, Boston Con. Gas Co., Boston, Mass.
Sec.-Tr. Industrial Div.—L. E. Wagner, Providence Gas Co., Providence, R. I.
Chairman Acctg. Div.—R. D. Washburn, Massachusetts Lighting Co., Boston, Mass.
Sec.-Treas. Acctg. Div.—Otta Price, Boston Con. Gas Co., Boston, Mass.
Chairman Manufacturers Div.—T. F. Piser, Welsbach Co., Boston, Mass.
Sec.-Treas. Manufacturers Div.—J. H. McPherson, 7 Water St., Boston, Mass.
Conv., 1930.

**New Jersey Gas Association**
Pres.—R. A. Koelher, Public Service Electric & Gas Co., Newark, N. J.
Sec.-Tr.—H. E. Cliff, Public Service Electric & Gas Co., Newark, N. J.
Conv., 1930.

**Ohio Gas and Oil Men's Association**
Pres.—L. K. Langdon, Union Gas & Electric Co., Cincinnati, Ohio.
Sec.-Tr.—Wm. H. Thompson, 811 First National Bank Bldg., Columbus, O.
Conv., 1930.

**Oklahoma Utilities Association**
Pres.—T. R. Weymouth, Oklahoma Natural Gas Corp., Tulsa, Okla.
Mgr.—E. F. McKay, 1020 Petroleum Bldg., Oklahoma City, Okla.
Conv., 1930.

**Pacific Coast Gas Association**
Pres.—C. H. Dickey, Hotel Fairmont, San Francisco, Calif.
Exec. Sec.—Clifford Johnstone, 447 Sutter St., San Francisco, Calif.
Conv., Sept. 10-13, 1929, at Del Monte, Calif.

**Pennsylvania Gas Association**
Pres.—W. A. Norris, Lebanon Valley Gas & Fuel Co., Lebanon, Pa.
Sec.-Tr.—Geo. L. Cullen, Harrisburg Gas Co., Harrisburg. Pa.
Conv., 1930.

**Pennsylvania Natural Gas Men's Association**
Pres.—George W. Ratcliffe, Columbia Gas & Electric Corp., Pittsburgh, Pa.
Sec.-Tr.—*H. A. Gager, 2017 Farmers Bank Bldg., Pittsburgh, Pa.
Conv., 1929.

**Southern Gas Association**
Pres.—Roy A. Zeigler, Jacksonville Gas Co., Jacksonville, Fla.
Sec.-Tr.—J. P. Connolly, 141 Meeting St., Charleston, S. C.
Conv., 1930.

**Southwestern Public Service Association**
Pres.—W. H. Burke, Stone & Webster, Inc., Houston, Texas.
Chairman Gas Section—R. A. McNees, San Antonio Public Service Co., San Antonio, Texas.
Sec.—E. N. Willis, 403 Slaughter Bldg., Dallas, Texas.
No Convention, 1929.

**The Public Utilities Association of Virginia**
Pres.—A. W. Higgins, Virginia Public Service Co., Charlottesville, Va.
Sec.—A. B. Tunis, 301 East Grace St., Richmond, Va.
Conv., 1929.

**Wisconsin Utilities Association**
Pres.—G. W. Van Derzee, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.
Exec. Sec.—J. N. Cadby, 432 Broadway, Milwaukee, Wis.
Meetings of Sections.

*Deceased.

Eleventh Annual Convention of the American Gas Association
Atlantic City, N. J. October 14-18, 1929

Annual Meeting of Natural Gas Department
Kansas City, Mo. May 6-9, 1929

# Employment Bureau
## (Address All Communications to Key Number)

### SERVICES REQUIRED

**A LARGE GAS COMPANY** in an Eastern city wants an industrial gas man of some experience. Address A. G. A.
Key No. 0130.

**A HOLDING COMPANY** desires to secure the services of a young engineer with four to six years' experience in distribution work, thoroughly familiar with mains and transmission lines. Please state full qualifications in first letter and salary expected. Address A. G. A.
Key No. 0135.

**GAS SALES ENGINEER**—Experienced in householeating. State complete details as to experience, age and salary desired. Address A. G. A.
Key No. 0136.

**WANTED:** Gas fired boiler, house heating sales engineer in New England territory. Position offers unequaled opportunity to the right man. Replies held in strictest confidence.
Key No. 0139.

**HOUSE HEATING ENGINEER** to supervise house heating sales and service. Requirements: College graduate 32 to 40 years old. At least five years' experience in combustion engineering and plant operation; thorough knowledge of house heating equipment, systems and sales promotion work. Give age, education, experience, and salary desired.
Key No. 0140.

**LARGE EASTERN UTILITY** wants Sales Engineer (Mechanical or Chemical preferred), 27 to 32 years of age, to sell manufactured gas for heating processes. Knowledge of combustion, furnace design and construction, and modern industrial heating practices desirable. Address A. G. A.
Key No. 0141.

**GAS SALES ENGINEER**—Utility Company operating in Connecticut requires services of gas sales engineer with experience in application of gas to industrial processes. State age, experience and salary desired. Address A. G. A.,
Key No. 0142.

### SERVICES OFFERED

**CHEMICAL ENGINEER**—38 years of age—15 years' experience in water and Coal Gas Plant operation, construction, distribution, and By-Product Plant work, desires connection as Gas Engineer with a holding company, or large individual gas company. Address A. G. A.
Key. No. 265.

**WANTED**—Position as manager of a small gas company or assistant superintendent of a larger company, by practical man, 36 years old. Married. 12 years' experience including water gas plant operator both high and low pressure, also all branches of distribution. Best of references. Address A. G. A.
Key No. 266.

**WANTED**—Position as manager of industrial department as well as house heating, commercial, hotel and restaurant work. Now with large company in above capacity. Middle age, good experience and reference. Can handle large job. Address A. G. A.
Key No. 269.

**MANAGER OR GENERAL SUPERINTENDENT**—25 years' experience in the construction, manufacture, distribution, valuation, public relations, and sales. Both coal and water gas, high and low-pressure. Age 40 and married. Good references. Address A. G. A.
Key No. 270.

**EXECUTIVE**, graduate engineer, 15 years' experience, construction, operation, management, mostly electric light and power public utilities. Schooled by a financial leader of the industry, especially in reduction of operating expenses. Knowledge of state regulatory requirements. Would be interested in holding company appointment, preferably salary plus percentage of effected savings per annum. Address A. G. A.
Key No. 273.

**OPPORTUNITY** to secure services of experienced gas range salesman as representative of manufacturer in Eastern Territory. Knowledge of gas appliances covered by 15 years' experience, both local and traveling. Utility and general trade. Available January 1, 1929. Address A. G. A.
Key No. 276.

**GAS ENGINEER**. College trained, thirty years old, married and employed at present. Nine years' experience in operation many types and sizes of coal, water, blue and producer gas plants. Address A. G. A.
Key No. 277.

**EXPERIENCED CONSTRUCTION ENGINEER** and designer with a good technical background and structural steel experience desires to locate in New York or vicinity. Address A. G. A.
Key No. 278.

**EXECUTIVE**, graduate Mechanical Engineer with 20 years' experience in design, construction, operation and management of Gas Properties. Competent to handle all local affairs, increase business and reduce operating costs. Would like appointment as Manager of small property, or Division Manager or Gas Engineer of close connected group. Age 41. Married. Good references. Address No. 279.
Key No. 279.

**AVAILABLE**—A man who is employed at present as an Engineer at one of the properties of a large holding company. During his ten years in the business he has been cadet engineer, plant foreman and superintendent's assistant in large plants and manager of a small property. Thorough knowledge of water gas operation, high- and low-pressure distribution, and office routine. Technical graduate, 39 years of age. Address A. G. A.
Key No. 280.

**ENGINEER** with 7 years' experience in gas and electric utility construction, maintenance, operation and accounting, desires new connection as manager, assistant manager, or superintendent of small utility. New England preferred. Address A. G. A.
Key No. 281.

**SALESMAN** with wide experience, including sales promotion, desires connection as representative for manufacturer. Acquainted with gas companies and dealers in territory from Boston to Washington. Proposition on agency basis for Eastern territory or Pacific Coast also considered. Address A. G. A.
Key No. 282.

**GAS DISTRIBUTION ENGINEER**. Also fully acquainted with manufacture and utilization. Understands the necessary methods of handling the public and municipal officials. Ready to serve at once. Will go anywhere, if position is permanent. References will be given by district or city or other local and managing companies. Address A. G. A.
Key No. 284.

**GAS ENGINEER**, college education, with twelve years' experience, first four with Coal Gas & Electric Co., last eight years as manager of small Water Gas Co., desires position as manager or assistant manager of a gas or combination company. Address A. G. A.
Key No. 285.

**ADVERTISING MAN** of wide experience, now employed by large public utility, available for position as director of publicity either in same field of work or with manufacturer. Capable of organizing and directing an advertising department, or handling the job unassisted. Age, 35; married; Protestant. Willing to locate anywhere. Ready to entertain further negotiations. Address A. G. A.
Key No. 287.

**MANAGER OR GAS DISTRIBUTION SUPT.** Man with over 20 years' experience in one company desires position as manager of small property or distribution superintendent. Am experienced in water gas, high and low pressure, and can furnish the best of references from former employers, municipal authorities, etc. Age 43. Address A. G. A.
Key No. 288.

**METER SHOP FOREMAN**—Company with 150,000 meters, located in Pennsylvania, has an opening in its meter shop for a capable foreman experienced in the repair and maintenance of tin and iron meters. Must be able to handle men and have ability to maintain an efficient organization. In reply, please state fully your age, experience, married or single, salary expected, and how soon available. Address A. G. A.
Key No. 289.

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